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A Mixed Methods Feasibility Study Exploring the Impact of Introducing Mindfulness to Adolescents Referred for Anxiety Based School Refusal

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A Mixed Methods Feasibility Study Exploring the Impact of Introducing Mindfulness to Adolescents Referred for Anxiety Based School Refusal

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List of abbreviations

ABSR	Anxiety Based School Refusal
ANOVA	Analysis of Variance
AFQ-Y	Acceptance and Fusion Questionnaire for Youth
CAMM	Child and Adolescent Mindfulness Measure
CBCL	Child Behaviour Checklist
CBT	Cognitive Behavioural Therapy
DfES	Department for Education
DHSSPSNI	Department of Health, Social Services and Public Safety
EA	Education Authority
EOTAS	Education Other Than At School
MBCT	Mindfulness Based Cognitive Therapy
MBI	Mindfulness Based Intervention
MBSR	Mindfulness Based Stress Reduction
MiSP	Mindfulness in Schools Project
SDQ	Strengths and Difficulties Questionnaire
RCT	Randomised Controlled Trial
TA	Thematic Analysis
TAU	Treatment As Usual
WoE	Weight of Evidence
WEMWBS	Warwick-Edinburgh Mental Wellbeing Scale

Overview

The term "school refusal" is used to describe a small group of students who do not attend school for underlying emotional reasons. Left unaddressed school refusal can lead to serious problems such as emotional distress, academic decline and isolation from peers. Effective intervention is thus required to prevent further long-term consequences and develop the young person's capacity to cope and progress effectively. This thesis explores the impact of introducing students referred for anxiety based school refusal (ABSR) to mindfulness, and the ways in which this may support their emotional well-being.

Part 1 is a literature review, which critically examines research in the areas of school refusal and mindfulness. A more focused systematic review is then conducted to evaluate the use of mindfulness with adolescents experiencing emotional distress, identifying four studies for inclusion. The majority of the studies report positive outcomes but the strength of their design varied. Overall the studies provide limited but promising evidence for the benefits of mindfulness to improve some aspects of adolescents' well-being. From this review research questions are presented.

Part 2 is a mixed methods feasibility study exploring the effects and experience of introducing students referred for ABSR to mindfulness. It begins by presenting the research hypothesis and design, methodology and finally the procedure. The quantitative and qualitative findings are then reported. Combining both sets of findings, and relevant literature, develops an overall discussion with an examination of the research hypothesis in light of the results obtained. The section ends with a discussion of the implication of the findings.

Part 3 provides a critical appraisal of the research. It considers the methodological limitations as well as the as well as the implications for future research and educational psychology in practice. The final part includes the author's personal reflections regarding the research process. References are presented in Part 4 and the Appendices are contained in Part 5.

Part 1

Literature Review Paper

A Mixed Methods Feasibility Study Exploring the Impact of Introducing Mindfulness to Adolescents Referred for Anxiety Based School Refusal

1.0 Literature Review Paper

1.1 Introduction

1.1.1 Background

Over the past two decades mindfulness, a practice based on concepts within Buddhist thinking, has become increasingly popular as a psychological intervention in the Western world (Iyaduria, Morris, & Dunsmuir, 2014). Mindfulness is about paying attention to the present moment, with an attitude of acceptance and openness (Iyaduria, 2013). Mindfulness training programmes with school-aged children are progressively being used to address a broad range of social and emotional targets as well as enhancing well-being (Harnett & Dawe, 2012). Mindfulness techniques are taught as "tools" which are used to self-manage attention and observe thoughts, feelings and body sensations in a non-judgmental way (Semple, Reid & Miller, 2005). Recent systematic reviews of mindfulness interventions with young people indicate the promise of mindfulness as an effective psychosocial intervention, with results showing enhanced cognitive performance, increased resilience and improvements in stress and coping in healthy school-age samples (Felver,Celis-de Hoyos, Tezanos & Singh, 2013; Zenner, Herrnleben-Kurz & Walach, 2014). A meta-analysis by Zoogman, Goldberg, Hoyt & Miller (2014) highlights populations for whom mindfulness may be beneficial. Their findings suggest that mindfulness may be particularly helpful for young people who suffer from high levels of symptomology (e.g., anxiety and depression). This current study is designed to examine the potential benefits of a mindfulness intervention with students referred for anxiety based school refusal; a group whose difficulty attending school is associated with emotional

distress and frequently present as a challenge to mental health and education professionals (Heyne & King, 2004).

1.1.2 Personal and Professional Interest in the Area

My awareness of the critical issue of school refusal, in the work of Educational Psychologists (EP) was deepened in the first year of our Doctoral Training, following a lecture given by an EP on the topic of "anxiety based school refusal". Upon reading the literature surrounding "school refusal", described as a students' difficulty attending school and in many cases, prolonged absence from school (Maynard et al., 2015), I was struck by the influence of the medical model and the pervading "within child" perspective (Gregory & Purcell, 2014). At the same time I became increasingly aware of Bronfenbrenner's ecological model (1977) and began to consider how the emotional lives of young people can be affected by a number of interconnected systems (e.g., individual, family, school). In particular I became interested in how school, as a system, could support a young person's emotional needs and capacity to deal with the everyday stresses of adolescent life. Reflecting on my personal understanding and practice of mindfulness, I began to consider how techniques from it could help this group of young people to work through difficult mental states and experience a greater sense of well-being. The "Mindfulness in Schools Programme" (MiSP) **".b**" (dot-be) (Burnett, Cullen & O'Neill, 2011) was chosen for this study as it is especially designed for school students, is a group-based intervention and has been shown to have positive influence on adolescent well-being, stress and depression (Kuyken et al., 2013; Hennelly, 2011).

1.1.3 Interest of Local EPS Services

The Education Order (NI) 1998 duties the Education and Library Board (ELB)[1] to provide education other than at school (EOTAS)[2] for young people who, due to their significant social emotional behavioral needs, medical needs or otherwise, are unable to attend mainstream education placements (BELB, 2012). In 2011 an EOTAS provision was established in Belfast for post-primary students with anxiety based school refusal (ABSR)[3]. A referral from Child and Adolescent Mental Health Services (CAMHS) is necessary to avail of this provision and the EOTAS works in partnership with CAMHS, a Child and Family Clinic Team and the Education Authority (EA). The role of EPs in this setting is to promote students' self-esteem and confidence and to help them cope with the difficulties that impact their ability to attend mainstream school. It is within these aims that the implementation of a mindfulness programme, as proposed by this research, was considered appropriate and potentially helpful. The programme was fully supported by the School Principal and Vice Principal (VP) as part of the students' education provision.

1.1.4 Unique Contribution of the Literature Review

The intention of this literature review is to build a rationale for the use of a mindfulness intervention with secondary school aged students referred for ABSR through a combination of factors, including:

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[1] The five ELBs in Northern Ireland became one "Education Authority" (EA) as of the 1st of April 2015 under the Education Act Northern Ireland. The EA is sponsored by the Department of Education. http://www.eani.org.uk/

[2] EOTAS provision aims to meet specific needs to help young people overcome barriers to learning, particularly social, emotional and behavioural difficulties (SEBD). It allows children, who have otherwise disengaged, to participate in education until they are prepared for re-entry to an existing school place or maintain their education until compulsory school leaving age. Retrieved from http://www.niassembly.gov.uk/globalassets/documents/raise/publications/2015/education/2615.pdf

1. Undertaking an evaluation of the literature surrounding "school refusal", with the aim of exploring current intervention approaches, their evidence base and efficacy.
2. An examination of mindfulness based training as a potential intervention for use in educational settings, namely as a way to reduce psychosocial problems and promote positive attributes for young people.
3. Undertaking a systematic review to evaluate the existing evidence base for the use of mindfulness with young people experiencing emotional difficulties, comparable to those associated with school refusal, i.e., internalising problems such as emotional distress, anxiety, depression and social withdrawal.

1.1.5 Overview of Literature Review

This current study explores the feasibility and impact of teaching mindfulness skills to young people who are referred to EOTAS provision for ABSR. The literature review begins by discussing the issue of young people's mental health with a particular focus on internalising problems in adolescence. The problem of 'school refusal' is then introduced with reference to conceptualisation, prevalence and clinical presentation, and potential adverse outcomes. The commonly studied interventions for school refusal are also described and critically evaluated. The promise of school-based psychosocial interventions is then explored and the important role and contribution of an EP is emphasised. Following this the concept of mindfulness is introduced and the potential effectiveness of mindfulness training for young people is evaluated, with reference to the growing yet tentative empirical research in the area. A systematic review of the evidence for mindfulness-based interventions and

internalising problems in adolescence is then presented, building an overall rationale for the study. The review concludes with an explanation of the contribution of the study to the existing literature and the research questions for the study are outlined.

1.2 Young People's Mental Health

The World Health Organisation (WHO) defines mental health as "a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community" [4]. The mental health of adolescents (12-18 years[5]) is of particular concern, due to the dramatic changes in biological, physical, emotional and cognitive domains; as well as unique contextual challenges such as school pressure and changing peer relationships (Bluth et al., 2015; Leavey, Galway, Rondón & Logan, 2009). While some experience of stress is expected during this period of transition and growth, excess anxiety and stress may interfere with an adolescent's healthy development and ability to cope (Schonert-Reichl & Lawlor, 2010; Milligan et al., 2016). Adolescence also marks a prime time for the onset of psychological disorders (Kessler et al., 2001) and recent international figures estimate that approximately 1 in 10 young people in the UK experience a mental health disorder[6]. The overall prevalence of mental health problems in Northern Ireland is estimated to be higher than England and Scotland (1 in 6 of the population) with 20% of young people reported to suffer "significant mental health problems" by the age of

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[4] Retrieved online http://www.who.int/features/factfiles/mental_health/en/

[5] For the purpose of this study young people are defined as adolescents aged 12-18. This is comparable to the age range of secondary school students, who are of relevance to this study.

[6] Retrieved on line http://www.youngminds.org.uk/training_services/policy/mental_health_statistics

18[7]. In children and adolescents, distinct aspects of mental health can be described as 'internalising problems' or 'externalising problems' (Goodman, Lamping & Ploubidis, 2010). Internalising problems are defined as problems mainly within the self and are suggested to have a greater impact on adolescents (Greenberg, Domitrovich, & Bumbarger, 2001). Internalising problems commonly manifest as withdrawn behaviour, frequent worrying or more persistent symptoms like emotional distress, anxiety and depression (Terzian, Hamilton, & Ericson 2011).

The particular provision for the mental health needs of Northern Ireland, based on the legacy of 'The Troubles', has been highlighted in two recent United Nations (UN) reports regarding the review of the implementation of children's rights (UN, 2008). These issues are also being addressed under 'Our Children and Young People – Our Pledge' (DHSSPSNI, 2006), a 10 year strategy that is built around six high level outcomes[8]. Psychological health issues are also a salient concern for school communities and educators, as affected young people may struggle to access the education system (Department of Education, 2014). This may in turn impact upon specific areas, such as their willingness to attend school (Nuttall & Woods, 2013). Of central concern to this current study are the mental health aspects that interfere with school attendance, as it has been suggested that those who are generally prone to anxiety, depression and associated social difficulties may be particularly susceptible to prolonged school absence (Elliott, 1999).

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[7] Statistics retrieved from Delivering Excellence Supporting Recovery Report (2009). http://www.dhsspsni.gov.uk/mental_health_nursing_framework_-_delivering_excellence_d6.pdf

[8] Outcomes include the right for children to be healthy; enjoying, learning and achieving; living in safety and with stability; experiencing economic and environmental wellbeing; contributing positively to community and society; and living in a society, which respects their rights.

1.3 School Non-Attendance

Students fail to attend school for a variety of school-based and home-based factors and during adolescence particular anxiety regarding the school experience is considered more common, e.g., difficulties with an academic subject, fear of a particular teacher, social isolation, bullying. For the majority of students, these problems can be resolved and the student assumes regular attendance at school (Gregory & Purcell, 2014). However, there is a minority who continue to experience school non-attendance over a prolonged period of time; in the case of Northern Ireland severe difficulty attending school is operationalized as less than 85% attendance[9] over two weeks. Persistent non-attendance is reported to incur economic and social costs for communities and society, as well as psychological costs for the young person, including poor academic outcomes, mental health difficulties and poor achievement in adult life (British Psychological Society)[10]. The 'problem' of school absence, first described by Carl Jung (1913) has thus been subjected to detailed clinical research and studies (Berg, 1992) yet correspondingly significant gaps in present knowledge indicate a need for continued research in the area.

1.4 School Refusal

Egger, Castello, and Angold, (2003) report that children who fail to attend school are commonly classified by researchers and clinicians as either:

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[9] In Northern Ireland every school has a link Education and Welfare Officer (EWO) whose aim is to reduce unnecessary absences from school by offering support and help to pupils, parents and schools. A school will make a referral to Education Welfare Service when a pupils' attendance is a cause for concern or drops below 85% (www.deni.org.uk)

[10] Behaviour change: School attendance, exclusion and persistent absence. www.bps.org.uk

i) those who stay home from school due to emotional distress associated with school attendance;

ii) those who choose to skip school due to lack of interest and/or defiance of authority, referred to as "truancy".

For the purpose of this review we are interested in emotionally-based absenteeism or 'school refusal'. This is considered different to truancy, which typically involves a preference for not attending and is commonly associated with severe externalising behaviour (Maynard et al., 2015). Table 1.1[11] below highlights some of the distinctions typically made between truancy and school refusal.

Table 1.1

Distinguishing truancy from school refusal

Truancy	School Refusal
Lack of emotional distress about attending school	*Severe emotional distress when faced with the prospect of attending school*
Absence from school hidden from parents	*Parents aware of absence from school*
Higher incidence of antisocial behaviours[12]	*Absence of significant antisocial behaviours*
Pupil shows limited interest in completing school work	*Pupil will complete school work at home*

[11] Adapted from McIlree, G. Enabling children and young people with attendance problems to develop the four (CfE) capacities. The Professional Development Programme for EPs in Scotland. http://www.educationscotland.gov.uk/Images/PDPAttendanceCapacities_tcm4-629071.pdf

[12] Examples of antisocial behaviour include may include juvenile delinquency, disruptiveness and sexual activity

1.4.1 Terminology Relating to School Refusal

There are contentions in the literature regarding the terms used to describe young people who fail to attend school and this has implicated effective classification, assessment and treatment of this vulnerable population (Kearney & Albano, 2004). The term "school phobia" was first coined by Johnson et al., (1941) referring to a child's fearfulness and intense anxiety about attending school (Elliott, 1999). This term has been de-emphasized in recent literature as it assumes that for all young people school evokes a specific fear response (Kearney, 2008; Nuttal & Woods, 2013). Chitiyo and Wheeler (2006) promote "school refusal" to denote emotionally-based avoidance of school whereas Lauchlan (2003) refers to the term "chronic non-attendance". Kearney and Silverman's (1996) definition "school refusal behaviour" provides an umbrella term, capturing a wide range of externalising symptoms and behaviours precipitated by other anxiety provoking situations such as separation from a parent (Nuttall & Wood, 2013). Recognising the heterogeneity among this group of young people led Kearney and Silverman (1996) to examine the reasons *why* young people do not attend school, rather than categorisation through symptoms (Miller, 2008). Their model for classifying school refusal is based upon the function school refusal behaviour serves for the child, suggesting that understanding the function helps inform the appropriate intervention (Lauchlan, 2003).

Carroll (2015), an educational psychologist, argues that the term "school refusal behaviour" may, in some cases, be harmful as it is closely associated with a "child motivated refusal" to attend school. Carroll favours the term "pupil absenteeism", as it focuses on absence as the problem rather than the child.

It should be noted that other EP's have chosen to use more neutrally focused labels such as "extended school non-attendance" (Pellegrini, 2007; Gregory & Purcell, 2013). For the purpose of this review the more general term "school refusal" is used, implying an emotional difficulty with school attendance (Heyne & King, 2004). Anxiety based school refusal (ABSR) will be used when referring to the current study; this term is defined by the referral criteria employed by the EA and CAMHS to access this particular EOTAS provision.

1.4.2 Prevalence and Presentation

The prevalence of school refusal varies, due to the population studied and differing criteria to define the term, yet overall it appears that 1% - 2% of school aged children are affected at any one time (Heyne & King, 2004). On the basis of these figures, emotionally based school refusal is estimated to occur in 1%-5% of cases (Kearney, 2008). The onset of school refusal can be sudden or gradual and is considered to generally peak at times of school transition, i.e. from primary to secondary school (Kearney & Bates, 2005). Berg (1992) makes the point that very few cases of school refusal are found before adolescence, after which it increases significantly. School refusal is widely considered 'heterogeneous' and 'multi-causal' (Elliott, 1999) and correspondingly 'school refusers' have been described as "one of the most amorphous populations in clinical child psychology" (Kearney, 2001). Emotional distress is thus reported to manifest in a variety of internalising and externalising behaviours such as; fear, anxiety, withdrawal, somatic complaints (headaches/stomach pain), situational avoidance, aggression, temper tantrums, as well as a reluctance to leave home and attend school (West Sussex County Council, Educational Psychology Services, 2004; Kearney, 2008).

The cognitive component of school refusal is suggested to involve irrational or maladaptive cognitions that maintain the young person's emotional distress and absenteeism (Maynard et al., 2015). Cognitive responses may include: excessive worry, overestimating the likelihood of anxiety provoking situations (occurring either at home or at school) and magnifying the unpleasant aspects of school (Heyne & King, 2003). In these instances young people's estimation of their ability to cope is much lower, particularly when dealing with stressful situations (Pina, Zerr, Gonzales, & Ortiz, 2009).

1.4.3 Psychological Difficulties Associated with School Refusal

School refusal is considered a psycho-social problem as opposed to a 'psychiatric diagnosis' and does not appear in major diagnostic classifications (i.e., DSM-IV/V, ICD-10) (Elliott, 1999). Clinicians are thus reported to rely on diagnostic categories to identify the underlying reason for school refusal, as a sign or symptom of an emotional disorder (Egger et al., 2003). Research examining the prevalence of psychiatric disorders among school refusers suggests that almost two thirds present with a clinical diagnosis, owing most prominently to separation anxiety and depression (Kearney & Albano, 2004; Egger et al., 2003). However, the extent to which separation anxiety can account for school refusal is questioned and is more likely to explain the difficulties experienced by a young child rather than an adolescent (Elliott, 1999). Van Amerigen, Mancini, & Farvolden (2003) make the point that school refusal can also be a manifestation of symptoms associated with social anxiety, specifically "communication apprehension"; an internal cognitive state generated by fear of communicating with others.

Those who have anxiety about these types of social interactions may worry about being humiliated in front of peers and feel uncomfortable in social situations (Wimmer, 2008). Increasing attention is also being paid to the association between school refusal and depression, particularly in adolescent school refusers (Heyne & King, 2003) as well as the high prevalence of comorbidity of anxiety and depressive disorders (Elliott, 1999). Hans & Eriksson (2012) suggest that problematic depressive symptoms can cause the young person to isolate themselves from friends and family, manifesting in a resistance to attend school. The association between school refusal and peer relationships has also been investigated as part of a community study by Egger and colleagues (2003). Their results demonstrate that those with "pure anxious refusal" were shyer, had experienced being bullied or teased by peers and had more difficulty making or keeping friends due to withdrawal, compared to non-school refusers.

1.4.4 Potential Consequences of School Refusal in Young People

Increasing clinical and research evidence suggests that school refusal is associated with potentially serious adverse outcomes, including education underachievement and impeded social development (Nuttall & Woods, 2013) and if untreated can result in leaving school prematurely and future occupational difficulties (Kearney & Silverman, 2006). As young people with school refusal can present with anxiety and/or depressive symptoms, they are also at heightened risk for continued psychiatric problems in adulthood (Bernstein, Hektner, Borchardt & Mcmillan, 2001). A failure to cope in a complex setting such as school can therefore have serious long-term effects; yet correspondingly, coping with adverse life events has been recognised

as a mechanism for strengthening an individual's ability to cope in the future (Place, Hulsmeier, Davis, & Taylor, 2000). Evidence-based psychosocial interventions have thus been recommended to promote voluntary and regular attendance at school, strengthen coping skills and reduce emotional distress (Pina et al., 2009).

1.5. Interventions for School Refusal

Given the range of factors involved in the aetiology and maintenance of school refusal behaviour (Heyne et al., 2002), a wide gamut of interventions are proposed including pharmacotherapy, behavioural, cognitive and combined intervention approaches (Nuttall & Woods, 2013). While there appears to be a more recent focus on cognitive behavioural approaches it is important to briefly review other approaches that have been used, or continue to be used, in the treatment of school refusal.

1.5.1 Pharmacotherapy

Medical intervention for school refusal continues to be under-researched and controversial due to the risk of side effects and dependence (Elliott, 1999). Some authors report that school refusers respond ambiguously to medication, in part because of the fluid nature of anxiety and depressive symptoms in this population (Wu et al., 2013). Pharmacological treatment has also been used as an adjunct treatment with some success. For example Bernstein et al., (2001) found significant immediate improvements in adolescent attendance and a reduction in symptoms of depression within a CBT plus imipramine[13] group versus CBT plus placebo group.

[13]Imipramine belongs to a group of medicines called tricyclic antidepressants and is an antidepressant that is used to reduce panic attacks (Elliott, 1999).

However there appears to be a lack of evidence to support their efficacy and most commentators tend to recommend other approaches.

1.5.2 Behavioural Approaches

Behavioural strategies used with children refusing to attend school are described as primarily exposure based, tending to involve systematic desensitization (incorporating relaxation training), modelling, flooding, shaping, and contingency management (Kearney & Bates, 2005). These techniques have been applied when a quick return to school is warranted, particularly with primary school children (Maeda, Hatada, Sonoda & Takayama, 2012; Place et al., 2000). The emphasis of a rapid return to school (a form of flooding) stems from thinking within psychiatry and some consider it highly controversial (Miller, 2008). While the technique reduces reinforcement for being at home rather than school, some caution the stress it may place on the individual and their family, particularly when the child's anxiety is severe (Doobay, 2008). In their seminal article, Blagg and Yule (1984) compared the effectiveness of three different interventions for sixty six school refusers. Participants were assigned to one of three conditions; behaviour therapy, consisting of forced return to school and contingency contracting (n=30) psychotherapy and home tuition (n=20) or inpatient hospital care (n=16). Findings at 1-year follow up demonstrate the superiority of behaviour treatment, with 93% returning to school, compared to 37% of the hospital group and just 10% of the home tuition group. While this provides strong evidence for behavioural approaches, Elliott (1999) makes the point that as the sample were not randomly allocated to intervention groups the results may in fact reflect differences in the nature of the three groups.

Some authors also note that the specific mechanisms through which forced exposure enables approach behaviour, is still unclear (Chu & Harrison, 2007). In contrast, desensitisation approaches are more likely to employ a gradual reintroduction to school through graduated exposure, where the child attends school for activities that cause the least anxiety (Elliott, 1999). Currently treatment for school refusal tends to involve both cognitive and behavioural interventions (Maynard, et al., 2015), an approach that will now be reviewed.

1.5.3 Cognitive Behavioural Techniques

Cognitive behavioural techniques are considered a potentially efficacious treatment for school refusal and at present, cognitive behavioural therapy (CBT) is the only intervention that has been subject to rigorous evaluation, including randomised controlled trials (Miller, 2008; Kearney & Bates, 2005). CBT is thought to have clinical utility, due the brevity of the intervention, and is regarded as an acceptable approach for families and school staff (King et al., 1998). The goal of cognitive approaches is to modify a child's emotions and behaviours by examining and changing maladaptive thoughts, thus motivating a return to school (Heyne et al., 2002). Before the research support for CBT is presented, techniques central to this approach are briefly described.

1) Relaxation training: Teaching the young person how to manage the physiological arousal and uncomfortable feelings that occur in situations associated with school attendance.

2) Cognitive therapy: The use of cognitive restructuring to help the young person adapt dysfunctional thoughts in order to effect change on their emotions, behaviour and school attendance.
3) Enhancement of social competence: Social skills training to help the young person manage questions about their absence, respond to difficult social situations and form/maintain friendships.
4) Exposure-based techniques: Returning to school is a gradual, step-by step process (*in vivo* desensitisaition) or immediate, involving full-time attendance as soon as the young person returns to school. Exposure is considered a key component of CBT for school refusal (Adapted from Heyne & King, 2003, p. 257-261).

1.6 Research on the use of CBT for School Refusal

Pina et al.'s (2009) review of single-case and group design studies, which implemented CBT as an intervention, or part of an intervention "package", found partial support for CBT in reducing school refusal and related symptoms, such as anxiety, fear and depression. For example, large effect sizes were found in one study involving CBT with a parent training programme (d=.93) (King et al., 1998). However, Last, Hansen & Franco (1998) found no difference between CBT and Education Support Therapy conditions (d=-.07), with both groups showing improved symptoms. Maynard et al., (2015) conducted a more recent systematic review of eight studies to examine the effects of psychosocial interventions on school refusal. Their findings show mixed results for the effects of CBT on anxiety and attendance.

While psychosocial CBT and CBT-plus-medication interventions were found to have significant positive effects on attendance (g=0.54), effects on anxiety symptoms were not significantly different compared to controls (g=0.06). In an effort to explain these different effects the authors posit that increased exposure to school (i.e. improved attendance) may increase anxiety in the short-term (i.e. post-intervention); and anxiety may then reduce following prolonged attendance at school (i.e. follow-up). However only one study in the review, Heyne et al., (2002), examined the longer-term effects on both anxiety and attendance. Thus as Maynard et al., (2015, p.9) conclude 'there is insufficient evidence to indicate whether or not treatment effects sustain and whether or not anxiety might further decrease over time with continued exposure to school'. It is also important to note the reported differential impact of CBT; for example it has been estimated that one third to one half of anxious school refusers show little or no response to CBT (Heyne et al., 2002), yet correspondingly up to one half of students could benefit from this approach.

Another interesting research avenue that has been explored is the specific mechanisms through which CBT facilitates change, namely by examining the construct of self-efficacy. A person's self-efficacy is their belief in their ability to develop and master specific skills, and to influence specific events in their life (Bandura, 1977, in Hennelly, 2011). Maric et al., (2012) utilized a developmentally sensitive CBT programme for school refusal with adolescents, examining whether perceived self-efficacy, for handling school situations, impacted on school attendance and internalising problems. Their findings supported the mediating role of self-efficacy on outcomes of increased school attendance and reduced school-related fear post treatment, yet this impact was not found to be significant at the 2-month follow

up. It is worth noting that the skills taught as part of the CBT intervention were quite specific, focusing on how to cope with stressors related to school attendance, (e.g., answering teacher/peer questions about attendance). It has been acknowledged that skills must be generalized in order to benefit a person's life (Thompson & Gauntlett-Gilbert, 2008), thus to maintain the positive effects of CBT it may be necessary to expand the application of self-efficacy skills beyond school settings, for use in other areas of relevance to the young person's life (e.g., personal and future goals).

1.6.1 Conclusions

The research reviewed offers some support for CBT in the treatment of school refusal, predominantly for attendance outcomes and short-term improvement in anxiety and associated symptoms. However it is also recognized that there is a lack of evidence for other psychosocial interventions used in the treatment of school refusal (Maynard et al., 2015). It is therefore unclear whether CBT is in fact the treatment of choice or whether it is more frequently empirically evaluated. Some authors have suggested that future research could investigate 'protective' or facilitative factors to advance our understanding of effective intervention for school refusal (Heyne & King, 2003; Gregory & Purcell, 2014). This view has led to an increasing consideration of systemic factors that facilitate positive outcomes and in turn the potential for schools to meet the psychological needs of students and support the efficacy of interventions (Nuttall & Woods, 2013). However, the use of school-based approaches has tended to be underplayed in the literature (Doobay, 2008; Lauchlan, 2003). While research in the area is preliminary, it offers insight into how intervention approaches are applied within individual school contexts and the factors support their effectiveness (Nuttall & Woods, 2013).

1.7 Supporting School Refusal in a School Context

More recent studies in the field of Educational Psychology have taken an explanatory approach to discern critical factors in supporting a young person's return to school (Nuttall & Woods, 2013), unpacking the rhetoric surrounding the term "school refuser" (Gregory & Purcell, 2014). In these studies child, parent and staff perspectives are elicited, offering a dynamic view of the process of non-attendance and successful reintegration. Some of the child psychological factors revealed as being beneficial include; "*developing feelings of safety, security and belonging*", "*confidence*", "*self-esteem*" and these traits are thought to be supported by "*positive experiences*", "*a positive and nurturing attitude*" (Nuttall & Woods, 2013). These studies emphasise the importance of acknowledging the young person's psychological needs within the school environment, which is an important factor in understanding and addressing school refusal (Pellegrini, 2007). A particular emphasis on the facilitative factors, without denying the emotional distress component in school refusal, also helps shift the focus from the 'medical model approach' to a 'social model approach' which involves the student, their mental health and the school context (Gregory & Purcell, 2014). Other authors have also advocated a consideration of the wider aspects of school refusal; for example Maric and colleagues (2013) suggest that preventative interventions in educational settings could target self-efficacy related to a broader range of situations associated with school attendance. Similarly, Place et al., (2000) suggests taking a comprehensive intervention approach to improve youth's sense of achievement and ability to deal with stressful situations of all types, could be of considerable benefit.

1.7.1 Role of Educational Psychologists

The need to support young people with mental health and anxiety based conditions in EOTAS settings has been indicated in *The Chief Inspector's Report 2012-2014*[14]. It is suggested that EPs are well placed to provide such psychological support for students in EOTAS settings due to their increasing work with young people at risk or experiencing mental health difficulties, and their responsibility to promote inclusive schooling (Gregory & Purcell, 2014; Farrell et al., 2006). According to Carroll (2015) EPs can make a unique contribution to dealing with school absenteeism due to their understanding of child and cognitive development, their ability to conduct research and to implement effective intervention. In cases of acute refusal (2 weeks to one year) and chronic refusal (over one year)[15] EPs can be expected to be involved in:

i) a team approach to support the young person's return to school and management of the factors that motivated non-attendance, and/or;

ii) implementation of interventions to deal with school refusal.

Carroll (2015) suggests that current training equips EPs to implement evidence-based interventions, most notably CBT. The author also makes the point that there are "other group-based interventions with a psychological basis which could be used by EPs to deal with certain aspects of pupil absenteeism" (Carroll, 2015, p. 55).

[14] Education and Training Inspectorate (2014) The Chief Inspector's Report 2012-2014 Bangor: ETI http://www.niassembly.gov.uk/globalassets/documents/raise/publications/2015/education/2615.pdf

[15] (see Kearney & Albano, 2004)

Hans and Eriksson (2013), in their review of the literature on school refusal, make the case for mindfulness as an appropriate psychosocial intervention for this group, given the evidence for its efficacy in the enhancement of overall well-being and the treatment of anxiety related disorders and depression. However it has been suggested that mindfulness is yet to make an impact on the work of EPs (Davis, 2012). The importance of promoting positive outcomes for the mental health of students experiencing school refusal has been stated. The review will now focus on the potential of mindfulness, as a school based-intervention approach, to reduce mental health concerns and enhance psychological well-being. A review of the literature on mindfulness-based interventions is thus warranted to orientate the reader to the possible value of mindfulness training for young people experiencing school refusal.

1.8 Mindfulness

1.8.1 Explaining Mindfulness

In recent years the term "positive psychology" has unfolded, shifting the emphasis from a focus on dysfunction to studying the strengths that enable individuals to thrive (Huppert & Johnson, 2010). Work in this area has examined the positive features of human development, studying traits such as well-being, optimism, calmness, happiness and self-determination (Seligman & Csikszentmihalyi, 2000). The field has expanded to appreciate how these qualities can be fostered in young people and implicit in this movement is the assumption that education interventions can be developed to promote children's strengths and resilience (Schonert-Reichl & Lawlor, 2010).

A dimension of positive psychology identified as enhancing emotional well-being is mindfulness (Burke, 2010). Mindfulness first emerged in clinical psychology (Baer, 2003) yet techniques are thought to originate in the Buddhist thinking and meditation context. Over the past few decades this "mode of being" has been secularized and simplified to suit a Western context where it is proving effective in healthcare and occupational settings (Davis, 2012; Thompson & Gauntlett-Gilbert, 2008). It is argued that a clear understanding of mindfulness is only appreciated through full experiential involvement in guided practices of mindfulness, yet for the sake of clarity and sharing knowledge through research, a conceptual understanding of the term is useful (Davis, 2012). Professor Mark Williams (2011), University of Oxford, provides a comprehensible description:

> ***Mindfulness is a translation of a word that simply means awareness***. *It's a direct intuitive knowing of what you are doing while you are doing it. It's knowing what is going on inside your mind and body and what's going on in the outside world as well.* ***Most of the time our attention is not where we intended it to be.*** *Our attention is hijacked by our thoughts and emotions, by our worries for the future and regrets and memories of the past.* ***Mindful awareness is about learning to pay attention, in the present moment, and without judgment. It's like training a muscle - training our attention to where we want it to be.*** *This reduces our tendency to be on autopilot, allowing us to choose how we respond and react*[16]

[16] Retrieved online http://www.mindfulnet.org/

1.8.2 Mindfulness Training

The practice of mindfulness is typically taught as a series of simple meditation style exercises, including: formal seated meditation, a meditative "body scan", mindful movement, and mindfulness generalized to everyday activities (e.g., adopting a mindful approach to eating or walking) (Iyadurai, 2013). New skills are learned in a highly practical way (Kuyken et al., 2013) for example sitting in a chair silently, in a relaxed yet alert state, while guided to focus attention on certain stimuli: the breath, body, sounds and physical sensations. While doing this, the mind may habitually get caught up in an endless flow of thoughts. Mindfulness teaches individuals how to respond to these thoughts more "skilfully"; letting them pass without judging or elaborating on their content, and gradually allowing more control over where the mind is focused. Shapiro, Carlson, Astin, & Freedman, (2006) propose that mindfulness arises from the cultivation of three components: 1) Intention - *why* one is practicing 2) Attention - observing moment to moment experience without analysis or interpretation 3) Attitude - a quality of attention characterized by openness and compassion. A number of psychological mechanisms and constructs related to mindfulness have been suggested to explain its broad beneficial effects, some of which include:

Increased sensory awareness: Mindfulness practices are proposed to focus our attention on current sensory experience and in doing so create the mental space to stop and "be in the moment" (Huppert & Johnson, 2010). Increased sensory awareness is proposed to elicit positive emotions that if experienced recurrently, feed into overall well-being (Davis, 2012).

Appreciating positive sensory experiences is thought to produce a sense of calm (Kabat-Zinn, 1994, as cited in Baer 2003), which may explain feelings of relaxation following mindfulness training.

Acceptance: The goal of mindfulness is not to resist or alter private events, such as thoughts, feelings, memories and bodily sensations, but to accept present moment experience as it truly is, be it pleasant or unpleasant (Kabat-Zinn, 2004). Acceptance of these states is fundamental to mindfulness and is suggested to promote psychological flexibility; the ability to contact the present moment rather than being 'fused' with thinking about the past or future experiences (Greco, Baer & Lambert, 2008).

Emotional regulation: Mindfulness encourages a decentred perspective on feelings, allowing the individual to make choices before responding, rather than reacting "mindlessly", where behaviour occurs out of awareness (Huppert & Johnson, 2010). Taking this perspective is suggested to lessen the impact of intrusive emotional thoughts and unhelpful cognitive strategies such as rumination (Schonert-Reichl & Lawlor, 2010)

Cognitive control: Mindfulness does not demand clearing the mind of thoughts but facilitates a decentring perspective, creating space between thoughts that arise and our cognitive reactions to them (Semple, Lee, Rosa & Miller, 2010). This is suggested to reduce the tendency to get caught up in thoughts and fosters the capacity to direct and regulate attention at will (Davis, 2011).

1.8.3 Mindfulness and other Psychosocial Approaches

Mindfulness is suggested to share a core assumption of CBT; that thoughts are connected to feelings and behaviours. However mindfulness teaches a particular and distinct way of relating to thoughts and feelings. Unlike cognitive restructuring techniques used in CBT, where revising the content of cognitions is encouraged, the practice of mindfulness cultivates an attitude of noticing and letting be (Chambers et al., 2015). Whereas trying to change or control patterns of thinking have been noted to lead to further distress (Semple et al., 2005), mindfulness raises awareness that thoughts are only objects of the mind, to be noticed rather than engaged with. Mindfulness techniques thus resonate with acceptance approaches such as acceptance and commitment therapy (ACT). In this context psychological acceptance is described as a willingness to experience thoughts and feelings fully as they are, rather than becoming attached or 'fused' to their content and responding to this content as if it was real; otherwise known as cognitive fusion (Greco, Baer & Smith, 2008). Cognitive fusion is suggested to give rise to experiential avoidance, and together these two processes can produce psychological inflexibility; the opposing end of psychological flexibility. An awareness of how mindfulness relates and differs to cognitive and behaviour therapies, based on theoretical and clinically relevant constructs, is considered an important step toward expanding mindfulness-based approaches to younger populations (Greco et al., 2008). Before examining mindfulness with young people a brief review of adult mindfulness literature is presented.

1.8.4 Mindfulness with Adults

Mindfulness Based Stress Reduction (MBSR)[17] was originally developed as a manualised treatment by Kabat-Zinn (1990) as an intervention for patients experiencing chronic pain and stress. MBSR is now being used to treat a wide range of conditions and is increasingly being used in the field of clinical psychology (Black, Milan, & Sussman, 2009). . Therapies have followed the MBSR modality, such as Mindfulness Based Cognitive Therapy (MBCT), which integrates the practice of mindfulness with some of the principles of CBT (Sinha & Kumar, 2010). Evidence for mindfulness training in adults has been summarized in several major reviews and Baer's (2003) meta-analysis of 21 adult mindfulness studies indicates the effectiveness of the intervention on measures of physical (e.g., chronic pain) and psychological health (e.g., anxiety and depression) for a variety of populations, with effect sizes ranging from moderate to high. Baer (2003) concludes that mindfulness-based interventions 'may bring participants with mild to moderate psychological distress into or close to the normal range' (p. 137). A more recent meta-analysis by Khoury et al., (2013) further suggests that mindfulness based interventions are effective for a wide range of psychosocial difficulties, prompting the growing interest in the use of mindfulness for young people (Zoogman et al., 2014).

[17] Mindfulness is commonly taught to adults as an 8 week course, for two or three hours a week for eight weeks, following a tried and tested pattern, for example, mindfulness-based stress reduction (MBSR) or mindfulness-based cognitive therapy (MBCT). The National Institute for Clinical Excellence has recommended MBCT for depression (NICE guidelines).

1.9 Mindfulness with Children and Young People

Preliminary research exploring the effectiveness of standard and adapted versions of MBSR with children and adolescents are showing a range of positive initial outcomes, including reduced psychological difficulties and improved well-being (Felver et al., 2013; Burke, 2010). The application of mindfulness interventions in school settings is reported to have positive potential, as a means for enhancing students' 'whole education' as well as teaching self-regulation skills to deal with difficult emotions (Bennett & Dorjee, 2016; Felver et al., 2013). As the evidence base for mindfulness and young people is quite new, preliminary reviews tended to be comprehensive rather than systematic, as the research is empirically learning what the potential benefits are and for whom (see Meiklejohn et al., 2012). Felver et al., (2013) systematically reviewed the current literature base of mindfulness interventions with students in school settings, suggesting that mindfulness is feasible, acceptable and potentially helpful for improving psychosocial outcomes for young people. However a number of limitations in the existing literature were also identified, including: a lack of comparison conditions, active control groups, random assignment, reliance on questionnaire measures to assess effects and lack of follow-up assessments.

Recent meta-analyses have also been published to examine the effectiveness of mindfulness with young people across different settings, i.e., school and clinical settings. Zenner et al.,'s (2014) meta-analysis demonstrated medium overall effect sizes (ES) for mindfulness interventions across controlled studies (ES=0.40) and pre-post designs (ES=0.41) with the strongest effects in the domain of cognitive performance, resilience, stress and coping.

However the authors draw attention to the significant heterogeneity of the studies and therefore suggest the positive outcomes may also, in part, be contingent on other contextual factors e.g., how the programme is accepted and who delivers the intervention (teacher or outside trainer). The findings are thus presented as tentative as effect sizes are largely derived from small, underpowered studies and similarly none of the studies employed an active intervention or control. Zoogman et al.,'s (2014) meta-analysis of 24 mindfulness-based interventions (MBIs) with youth assessed what outcomes are best helped through mindfulness training and for which subsample of young people (e.g., clinical and non-clinical). The authors demonstrated that MBIs were most effective in improving psychological outcomes (ES=0.37) and these improvements were greater in clinical populations, compared to non-clinical populations. However the authors do point out that the number of clinical studies in this sample was small (n=4) and effect sizes may be slightly overestimated by the "small study effect", making a coherent evaluation of the effects of mindfulness more challenging.

The overall profile of the research appears to support the potential of mindfulness-based interventions for improving psychological outcomes for students and the possible efficacy of mindfulness in symptom reduction for young people experiencing psychological difficulty. While small improvements in well-being are noted the benefits appear more consistent for reducing negative rather than promoting positive outcomes (Waters, Barsky, Ridd, Allen, 2015). However these findings are interpreted with caution, given the aforementioned methodological limitations and the need for more rigorous experimental designs.

1.9.1 Mindfulness Based Interventions for Adolescents

Previous research reports the acceptability of MBSR programmes for adolescents, providing psychological support in a non-stigmatising and accessible way (Bennett & Dorjee, 2016; Meiklejohn et al., 2012). Mendelson et al., (2010) employed mindfulness-based practices, yoga and breathing exercises in their study of the feasibility of mindfulness interventions for disadvantaged young people, living in low income communities characterized by high levels of violence. Findings suggest that the intervention appealed to young people and they felt the skills learned could be used to deal with the stress of their day-to-day lives. Therefore a proposed advantage of MBIs is that adolescents acquire skills that are helpful, relevant and flexible, and having learned the skills can choose which work best for them and decide how to incorporate them into their own lives (Kabat-Zinn, 2004). In addition, mindfulness techniques promote the enhancement of self-awareness and decrease emotional reactivity to stressful events, therefore maybe particularly helpful for adolescents who still have numerous developmental challenges ahead of them (Thompson & Gauntlett-Gilbert, 2008). The potential of mindfulness to reduce stress and improve mental health outcomes for adolescents in select populations will now be further explored.

1.9.2. Targeted Mindfulness Approaches in Education Settings

Students with similar difficulties are frequently assigned to small groups within targeted interventions, to meet their needs as part of a three-tiered model of delivery service. MBIs have also been implemented with small groups of children presenting with comparable psychological difficulties, such as anxiety.

Semple and colleagues (2005) conducted a 6-week open clinical trial of a mindfulness-training programme for five children, aged 7-8 years, experiencing internalised anxiety problems. Results from the pilot initiative showed reductions in internalising problems for all children, based on teacher ratings of the Child Behaviour Checklist (CBCL), yet these were not analysed due to the small sample. The authors also report clinical observations, suggesting that the intervention was acceptable to the children, and that the program may be helpful in overall treatment for children presenting with anxiety symptoms.

Mindfulness has also shown to have an effect on depression in education settings. In an RCT trial of MBIs with 13-20 year olds, Raes Griffith, Gucht & Williams (2013) found students in the intervention group showed both a reduction in depressive symptoms for those already depressed and a preventative effect; reduced numbers becoming depressed at follow-up, relative to controls. These results are indicative of the clinically significant effect of mindfulness on low-grade depression in adolescents. Lau and Hue (2011) also report a reduction in depression for Hong Kong students following a 6-week mindfulness programme, compared to the control group. The quality of this study however is limited by a small sample size and lack of between-participants analysis for depression. Nevertheless the study also provides evidence for improved depression scores following a mindfulness intervention.

1.9.3 Implementing Manualised Mindfulness Programmes

MBIs for young people tend to be derived from MBSR or MBCT and there is a number of mindfulness programmes developed in the US for use in school contexts including: "Inner Kids" and "MindUp" for younger pupils, and "Learning to BREATHE" and "Mindfulness Education" for adolescents (Weare, 2013).

Programmes outside of the US are reported to be 'sparse' (Weare, 2013) yet one mindfulness-based curriculum developed in the UK is the Mindfulness in School Project (MiSP). The roots for MiSP are MBSR and MBCT, adapted for the developmental needs of young people aged 11-18. The MiSP programme " **.b", Stop-Breathe-Be,** is designed in accordance to the principles identified as being important for the effective implementation of school-based programmes that support social and emotional learning. These are outlined by Kuyken et al., (2013, p.2) as "explicit teaching of skills and attitudes, adapting components to suit young people, providing age appropriate resources to bring mindfulness to life and programme implementation that pays close attention to clarity and fidelity, supported by a manual and indicative script". The .b programme is taught to the whole class, and the universal use ensures all those who may benefit will do so, including those who are experiencing mental health difficulties, those in the normal range of mental health and those who are in a state of positive mental health (Kuyken et al., 2013).

1.9.4 MiSP Research

Huppert and Johnson (2010) report the outcomes of an initial control trial of a 4-week MiSP .b programme, finding significant effects on mindfulness, ego-resilience[18] and well-being for students who engaged in daily home practice. This is compared to smaller and non-significant changes for those who didn't practice; suggesting that increasing minutes of home practice may enhance the benefits of mindfulness interventions, an association empirically supported in Zenner et al.'s (2014) meta-analysis. Encouragingly students who were low on emotional stability

[18] Ego-resilience is defined as the capacity to modify responses to changing situational demands and especially frustrating or stressful encounters (Kuyken et al., 2013)

(i.e., anxious and neurotic) derived particular benefit and are arguably the most in need of the intervention (Huppert & Johnson, 2010). Since completing this pilot study the .b programme has been expanded to a 9-week course[19] and subjected to further research investigation. Hennelly's (2011) mixed-methods study found that, compared to passive controls, adolescents reported an increase in mindfulness, ego-resilience and well-being following participation in .b programme. A strength of this study is the inclusion of qualitative findings, permitting an exploration of potential mechanisms underpinning qualitative changes, for example increased awareness, self-regulation and self-efficacy. Kuyken et al.'s (2013) non-randomised controlled trial of the .b programme with secondary school students found significant results for increases in well-being, reduced stress and lower depression for those in the .b group at 3-month follow-up, compared to control group. This study provides promising evidence for the endurance of positive treatment effects as generally follow up periods in mindfulness studies are short, less than 8 weeks (Harnett & Dawe, 2010). A limitation lies in the purposeful sampling of schools, which were "interested, ready to participate and fee-paying" (Kuyken, 2013). Therefore the impact of the intervention may operate differently in other school communities, in particular when barriers exist due to school attitudes and limited resources (Lendrum et al., 2013). The use of a manualised intervention and adherence to protocol has been suggested to strengthen the argument for effectiveness (Semple et al., 2010; Lendrum et al., 2013), thus in the case of this study the structured curriculum of .b delivered by teachers experienced in mindfulness, adds to the rigor of the findings.

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[19] Based iteratively over 4 years input from over 200 teachers trained to teach MiSP and 200 young people who participated in pilot programmes (Kuyken et al., 2013)

1.9.5 Concluding Comments

Despite the limitations referred to in the review thus far, the literature supports a growing interest in mindfulness as a way to promote social and emotional well-being, as part of the school curriculum (Kuyken et al., 2013; Zenner et al., 2014). There is also evidence indicating positive psychological outcomes, such as reduced anxiety and depression, particularly in relation to clinical populations (Zoogman et al., 2014). Despite the growing body of research in the area the majority of studies on mindfulness with young people engage "healthy" students, in mainstream education settings, thus more research is warranted to focus on the impact of introducing mindfulness to more vulnerable student populations (Bluth et al., 2015). The use of qualitative methods has also been encouraged, to help refine how mindfulness is presented to young people and explore potential mechanisms of change (Davis, 2012). Mixed-methods approaches, such as interviews with student and/or, parent and teacher reports, are similarly recommended to help assess outcome and acceptability of teaching mindfulness in schools (Zenner et al., 2014). It is also worth noting that no studies that explored the potential of mindfulness as an intervention for young people with ABSR or school refusal were found. For these reasons this section concludes by building a rationale for the dissemination of mindfulness to young people referred for ABSR attending an alternative school provision.

1.10 Potential of Mindfulness for Anxiety Based School Refusal

Firstly, there is inconclusive evidence in favour of a particular approach used to treat "school refusal" (Lauchlan, 2003; Maynard et al., 2015). The empirical support for the effects of CBT on attendance is encouraging yet overall the results are mixed, with limited support for the sustained effects of CBT on internalising problems, such as anxiety and depression. Research studies exploring the issue of school refusal from an EP perspective shed light on the importance of considering positive psychological and systemic factors that facilitate effective intervention (Nuttal & Woods 2013; Caroll, 2015). More research is thus warranted to explore alternative intervention approaches and the mechanisms and contexts that support their potential effectiveness.

Secondly, while mindfulness training is not therapy (its beneficial effects are facilitated by mindfulness awareness) studies support the potential for mindfulness to improve adolescents' mental health, by enhancing well-being and reducing symptoms of depression and anxiety. Unlike CBT mindfulness emphasizes accepting, rather than trying to change problematic thoughts (i.e. cognitive reappraisal) or avoid affective states. As such, it could offer students referred for ABSR an adaptive way of attending to dysfunctional cognitive responses, with a sense of non-attachment, and in turn reduce their use of maladaptive strategies such as over-engagement or experiential avoidance (Chambers et al., 2015). Through this process young people learn to attend to their emotions more skilfully, choosing to self-regulate in ways that foster greater psychological well-being (Thompson & Gauntlett-Gilbert, 2008; Shapiro et al., 2006).

Thirdly the .b curriculum has the potential to be an appropriate way of teaching mindfulness skills to students referred for ABSR due to its development within a UK context, its delivery within a school-based setting, and preliminary evidence to suggest its significant effects on well-being, stress and depression (Kuyken et al., 2013; Hennelly, 2011).

More research is thus necessary to understand whether secondary school students, referred for ABSR, can similarly experience the broad beneficial effects of mindfulness. It is thus deemed appropriate to conduct a systematic review, from a narrower viewpoint[20], by focusing on the effects of mindfulness on the emotional difficulties this group of students are reported to experience, specifically internalising problems. It is hoped that this review will help build a basis for the potential of mindfulness as a promising intervention component for ABSR and the need for further research to investigate this proposed hypothesis.

1.11 Systematic Literature Review of Mindfulness for Internalising Problems in Targeted Adolescent Samples

A systematic review differs from a traditional narrative review in that it is conducted in a methodical manner, according to pre-determined protocol to minimise bias, with the goal of identifying relevant studies and summarising the important information from this body of literature (Dempster, 2011).

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[20] The researcher is aware of a recent review by Kallapiran Siew, Kirubakaran & Hancock (2015), which compares the efficacy of various interventions (i.e. acceptance and commitment therapy (ACT) and Dialectical Behaviour Therapy (DBT), mindfulness) on mental health symptoms in a broad range of samples (children and adolescents, clinical and non-clinical populations). Limitations of this review are in the inclusion of RCTs and publication bias. The current review thus offers a unique contribution as it focuses solely on mindfulness interventions (MBSR/MBCT) within a population of adolescents experiencing high levels of emotional distress (i.e. clinical population).

The focus of this systematic literature review is derived from the concluding comments of the previous section and the evidence set forth thus far. The intention of the researcher was to conduct a systematic review to identify as much as possible of the existing evidence relevant to the research question:

Do mindfulness interventions improve the psychological outcomes of adolescents, aged 11- 18, experiencing internalising problems?

This review process contributed to the development of the research questions for the current study. The systematic review will proceed as follows:

- An outline of the search strategy
- Definition of inclusion/exclusion criteria
- Assessment of the eligibility of retrieved articles, according to criteria
- Methods undertaken for appraisal
- Descriptions of the studies obtained
- Synthesis of data according to key features from those studies reviewed

An initial literature search was carried out on September 16th 2015 using the electronic databases PsychINFO, ERIC (Educational Research Index and Abstracts) Medline (EBSCO) and Web of Knowledge[21]. The following search terms were used to locate studies:

[21] The search strategy was the same in each case although the search system in Web of Knowledge is slightly different to the former databases. Using the term "internalising" yielded no results therefore the more widely used term "mental health" was used to identify relevant studies.

Table 1.2

Search terms applied to PsychINFO, ERIC, Medline and Mindfulness

Database	**Search Terms Applied**
PsycINFO/ERIC/Medline	Contains 'mental health' (abstract) AND 'youth' OR 'adolesc*' (abstract) AND 'mindfulness"
Web of Science	Contains 'mindfulness' (title) AND ('youth' OR 'adolesc*') (topic) AND 'mental health' (topic)
Mindfulness	Contains youth OR adolesc* AND 'mental health'

As can be seen from Figure 1.1, the database search yielded 62 studies; PsychINFO identified 26, 12 were located by Web of Science, 6 were revealed by Medline and 18 by ERIC. 27 of these results were duplicates. Having removed the duplicates, 7 studies that did not have adolescents as the target of the intervention were removed. 11 studies referring to mindfulness but not mindfulness interventions were also removed (e.g., as an outcome or correlate of another factor; development/validation of a mindfulness measure or programme). Inclusion criteria (listed in Table 1.3) were then applied to the remaining 17 studies and 7 were removed. The reasons for exclusion of these studies are summarized in Appendix 2.

On September 25th, 2015[22] the search criteria were also applied to the reference list of the 3 identified studies[23] and the electronic journal "Mindfulness", see Figure 1.2. It was expected that the Mindfulness journal would have a wide and comprehensive range of relevant studies. This process revealed an additional 36 studies, 2 of which were deemed suitable. Therefore from 98 articles across four databases, Mindfulness e-journal, and references, 4 articles both met the inclusion criteria and were accessible at the time of the systematic literature search. These studies are identified in Table 1.4, presented in the order in which they were identified.

[22] The databases were checked using the same research criteria up to January 31st 2016

[23] Within systematic literature review, the activity of searching through the reference lists of found research reports is known as "reference harvesting"

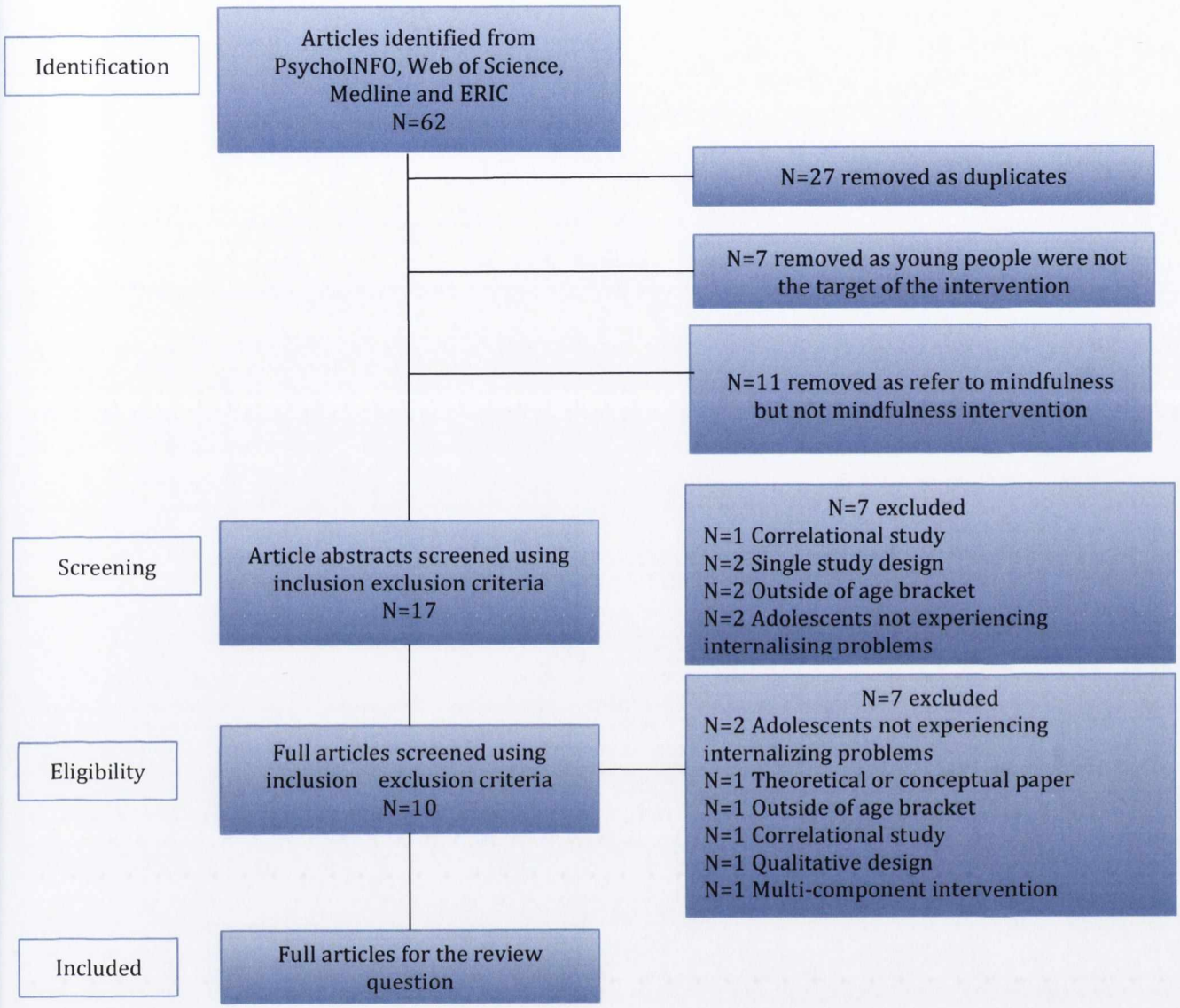

Figure 1.1. Database search and literature screening process

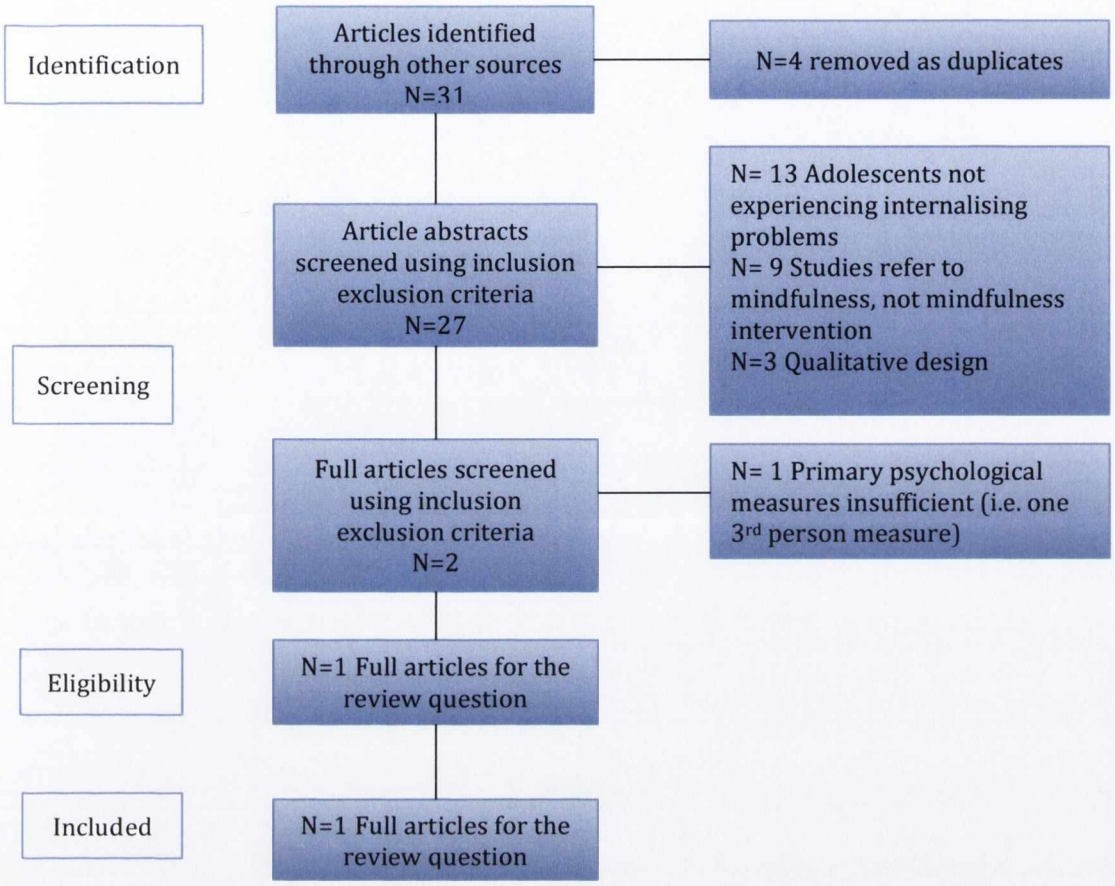

Figure 1.2 Search applied to reference list and Mindfulness journal

Table 1.3

Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria	Rationale
Publication type		
1.a Published/electronically available literature	Unpublished dissertation/thesis	Cost restraints of reviewer. Sufficient number of studies identified from database search.
1.b Study contains primary empirical data/original research	Study does not collect primary empirical data (e.g., review article, correlational, theoretical)	Primary empirical data will provide sufficient findings to explore the effectiveness of mindfulness interventions
1.c Study is written in English	Study is not written in English	Feasible for time and cost constraints of the reviewer
Participants and setting		
2.a Adolescence aged between 11-18[24]	Young people outside of this age bracket	Interested in secondary school aged population
2.b Adolescents identified must show initial signs or confirmed internalising mental health problems (i.e., depression, anxiety, withdrawal from others)	Adolescents whose mental health is within the normal range Adolescents who are identified as having other disabilities/difficulties (e.g., ADHD)	Adolescents with internalising problems are the population of interest

[24] These age bandings map onto the age of children attending secondary school in the UK and Northern Ireland http://www.theeducationwebsite.co.uk/index.php?page=secondary

Intervention		
3.a Interventions that follow the MBSR modality, such as MBCT OR manualised adaptations for school age populations (e.g., MBSR/MBCT) Sitting meditation as main intervention component	Multi component interventions[25] (Acceptance and Commitment Therapy), Dialectical behavioural therapy. Concentration based e.g. transcendental meditation. Physical movement forms of meditation (e.g., tai chi/yoga/martial arts)	The review is interested in therapies that follow MBCT/MBSR modalities adapted for use with children and adolescents
3.b Mindfulness intervention offered to adolescents only	Mindfulness intervention offered to parents, teachers, health professionals	Adolescents are the target of the review question
Study type		
4.a The study collects quantitative outcome data (e.g., pre and post intervention)	Qualitative data only	Review is interested in the impact of mindfulness over time
4.b The study uses primary psychological outcome measures (e.g., depression, anxiety, emotional problems, well-being, mindfulness)	Studies that did not report primary outcome mental health measures	This is the area of interest for the review question
4.c Intervention is group based	Single participant case studies	MBSR/MBCT/MBIs are commonly implemented in group design

[25] Zoogman et al., (2014) argues these should not be classified as mindfulness based interventions

Table 1.4

Final studies included in the systematic review

Biegel, G.M., Brown, K.W., Shapiro, S.L., & Schuburt C. M. (2009). Mindfulness based stress reduction for the treatment of adolescent psychiatric out patients: A randomized clinical trial. *Journal of Consulting and Clinical Psychology. 77, (5),* 855-866
Tan, L., & Martin, G. (2015) Taming the adolescent mind (TAU): a randomised controlled trial examining clinical efficacy of an adolescent mindfulness-based group programme. *Child and Adolescent Mental Health, 20, (1),* 49-55.
Sinha., U.K., & Kumar, D. (2010). Mindfulness-based cognitive behaviour therapy with emotionally disturbed adolescents affected by HIV/AIDS. *Journal of Indian Association of Child and Adolescent Mental Health. 6, (1),* 19-30.
Bluth, K., Campo, R.A., Pruteanu-Malinci, S.,Reams, A., Mullarkey, M. & Broderick, P.C. (2015). A school-based mindfulness pilot study for ethnically diverse at risk adolescents. *Mindfulness* doi 10.1007/s12671-014-0376-1

It should be noted that Bluth et al.,'s (2015) study included "high risk" adolescents, 23% of whom utilized mental health support and 87% were identified as "failing class". The specific social-emotional difficulties of participants are not confirmed in this study. However the decision was made to include this study as: **1)** it targets psychosocial outcomes (i.e. depression and coping) in secondary school aged students confirmed to be "at risk", **2)** employs a universal preventative mindfulness curriculum as a targeted approach for difficult emotional states **3)** is carried out in an alternative school setting. These elements are considered of direct relevance to the current study.

1.11.1 Evaluation

Following Gough (2007) the four studies identified were appraised using the Weight of Evidence (WoE) approach. WoE is a process that informs the overall judgment of "what a study contributes to answering a review question" (Gough, p. 223). WoE is designed to evaluate studies based on:

- (WoE A); methodological quality
- (WoE B); methodological relevance
- (WoE C); appropriateness of the study focus to the review question
- (WoE D); an overall weight of evidence based on weightings A-C

Gough's (2007) framework was chosen as it promotes a comprehensive and balanced weighting of evidence, allowing both 'non-review specific' and 'review specific' appraisals to be made. The methodological quality of each study was assessed using Kallapiran et al.,'s (2015) criteria which is based on previous systematic reviews of MBI's. Two different protocols were used, dependent on the study's research design (i.e., randomised controlled clinical trials or quasi-experimental/pre post designs). The studies were assessed to be of high quality if they fulfilled 7-8 criteria, medium quality if 5-6 criteria were met, and low quality if 4 or fewer criteria were met. The methodological relevance and appropriateness of the study were weighted according to the protocol described in Appendix 3. This is specific to the current review and has been designed informatively by the reviewer, using Gough's (2007) WoE framework. An overview of the final evidence ratings given to the included studies is presented in Table 1.5.

Table 1.5

Weight of evidence of selected studies

Study	WoE A: Methodological Quality	WoE B: Methodological Relevance	WoE C: Relevance to the Review Question	WoE D: Overall Weight of Evidence
Biegel et al., (2009)	High	High	Medium	**High**
Tan & Martin (2015)	Medium	High	Medium	**Medium**
Sinha & Kumar (2010)	Low	Medium	High	**Low**
Bluth et al., (2015)	Medium	Medium	Medium	**Medium**

Study one: Biegel et al., (2009) studied the effectiveness of a modified mindfulness based stress reduction (MBSR) intervention for psychologically symptomatic adolescents. 104 adolescents, aged 14-18, were recruited from an outpatient psychiatry unit in California and screened for eligibility. This resulted in a sample of 102 participants who were randomly assigned to MBSR and treatment as usual (TAU) (i.e. psychological care) or TAU condition. The average age of participants was 15.35 (*SD*= 1.20) of whom had a confirmed *DSM-IV-TR* diagnoses; namely mood disorders (49%) and anxiety disorders (30.4%). A manualised MBSR intervention (Kabat-Zinn, 1990) was used, comprising of eight weekly 2-hour classes, delivered by 2 MBSR trained Masters level instructors.

Adaptations were made to meet the need of adolescents, including reduced length of sessions and home practice and a specific focus on the unique stressors that adolescents face. Study measures of mental health included:[26]

I. Clinical measures:

   a. *DSM-IV* psychiatric diagnosis

   b. Current level of psychological and social functioning (Global Assessment of Functioning [GAF] scores)

      Assessments of mental health were made by clinicians blind to participants' treatment conditions. Scores of these measures reflected an increase or decrease in the number of diagnoses[27].

II. Self-report measures:

   a. *Perceived Stress Scale,* 10-item version (PSS-10; Cohen & Williamson, 1998) 5-point scale that measures the degree to which situations in one's life are appraised as unpredictable, stressful and uncontrollable.

   b. *State/Trait Anxiety Inventory* (STAI; Spielberger, 1983) 20 self-descriptive statements to measure anxiety.

   c. *Hopkins Symptom Checklist 90* (SCL-90-R; Derogatis, 1977) assesses psychological symptoms on a 5-point scale of distress.

   d. *Rosenberg Self Esteem Scale,* 10-item version (SES, Rosenberg 1989).

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[26] Sleep quality was assessed using a single item, scale of 1-7, at post-test and follow up.

[27] Diagnostic change variable accounted for change in number of diagnoses rather than severity (e.g. participant with depressive and anxiety disorder no longer diagnosed with depression at post-test).

A restricted maximum likelihood (REML) mixed model approach was used to assess the effects of MBSR + TAU compared to TAU on mental health outcomes at three time points (pre-test, post-test and 3 month follow up). Compared to controls, MBSR participants self-reported reduced symptoms of anxiety, depression, perceived stress and improvements in self-esteem over time, all ($ps < .05$). Reductions in psychological symptoms for the MBSR group were supported by significant improvements in clinician rated GAF scores and a higher percentage of mental health change, compared to TAU group. In addition, 45% of the MBSR sample showed improved diagnostic conditions and clinically significant reductions in the prevalence of anxiety disorders. This study provides convincing evidence for the efficacy of MBSR in the treatment of psychological symptoms experienced by adolescent psychiatric outpatients. While results are considered specific to the group under investigation, the benefits of mindfulness training are shown across a broad range of mental health indicators. More research is therefore needed to assess the generalisability of these findings to other psychologically vulnerable adolescent populations and their symptoms.

WoE 'A' was rated 'high' as almost all aspects of an RCT were implemented, however this could have been strengthen by the assessment and/or description of treatment fidelity. WoE 'B' was rated 'high' due to the use of multiple and multi-informant outcome measures of mental health. WoE 'C' was rated 'medium' as 24.5% of the sample was determined by "other" disorders. This limits, to some extent, the generalisability of the findings to the current study and the intended sample. The overall weighting (WoE 'D') was rated 'high' in light of the efficacy of mindfulness in improving mental health.

Study two: Tan and Martin (2015) conducted a randomised controlled trial to examine the effectiveness of a mindfulness based programme; Taming the Adolescent Mind (TAM), as an intervention for adolescents with mental health disorders. 91 participants, aged 13-18, (M=15.4 years, SD= 1.55) were recruited from community child and adolescent mental health clinics and randomly allocated to two groups:

> **TAU:** Control group received usual psychiatric care or "treatment-as-usual"
>
> **TAU and Mi:** Adolescents received mindfulness training and continued with usual care.

Further attrition resulted in 80 participants completing the clinical trial (n=43 TAU+ Mi, n=37 TAU). The TAM intervention was delivered to a total of 7 groups (min 4 and max 12 per group) by a "facilitator", whose level of training is not further described in this study. The programme was designed to train attention, increase social and emotional awareness and decentre from distressing thoughts/emotions through promoting mindfulness. Data was gathered from participants and their parents at three time points; pre intervention, post intervention and 3-month follow up. Measures included:

1. *Depression and Anxiety Stress Scale- short version* (DASS-21; Lovi-bond & Lovibond, 1995) consists of three subscales measuring depression, anxiety and stress.
2. *Rosenberg Self Esteem Scale,* 10-item version (SES, Rosenberg 1989).

3. *Resiliency Scale for Children and Adolescents* (RSCA; Prince-eMBURY, 2006) assesses Sense of Mastery, Relatedness and Emotional Reactivity on a 4-point scale.
4. *Avoidance and Fusion Questionnaire for Youth* (AFQ-Y short version; Greco et al., 2008) measures levels of psychological flexibility and experiential avoidance.
5. *Child and Adolescent Mindfulness Measure:* (CAMM; Greco et al., 2011) 10–item measure of children/adolescents' self-report of mindful awareness.
6. *The Child Behaviour Checklist* (CBCL; Achenbach, 1991) measures parent ratings of emotional, behavioural, social and academic problems.

A mixed model analysis assessed the overall difference in group outcomes (TAU +Mi vs TAU) for each primary measure across three time points (pre-intervention, post-intervention and follow up). Results demonstrated a significant effect of time (all ps=<.001) across all but one self- reported rating of mental health, resiliency. Interaction effects were also found (group and time) suggesting that intervention participants maintained significant improvements in psychological health over time, when compared to controls. This study is particularly encouraging as findings also showed increases in mindfulness to be predictive of improvements in mental health functioning (standardised β= -.42, p <.001).

WoE 'A' is rated 'medium' as the allocation of participants to control and experimental groups, as described in the study, was not adequately concealed. WoE 'B' was rated 'high' due to group comparisons across a broad range of outcomes and confirmation of the experimental hypothesis; mindfulness as a mediator of mental health.

WoE 'C' is rated 'medium' as the participant characteristics, namely their mental health disorders, are not clearly determined and described as "moderate to severe disorders". It is therefore possible that some participants may have presented with externalising mental health difficulties, which is not of direct relevance to this review. An overall weighting WoE 'D' is rated 'medium'.

Study three: Sinha and Kumar (2010) investigated the usefulness of MBCT for the treatment of internalising emotional problems in a sample of adolescents whose parents were identified as HIV positive. 12 adolescents (n=7 male, n=5 female), aged 13-15 years, were recruited purposefully through a Delphi based non-governmental organisation (NGO) working with HIV affected families. A clinical psychologist completed a baseline assessment of participants using the following measures:

1. *Youth self-report*-YSR (Achenbach & Edelbrock, 1983) a 119-item screening tool for internalising and externalising behaviour problems in children and adolescents.
2. *Children's Depression Inventory*-CDI (Kovacs, 2008) assesses depressive symptoms using a 27-item self-rated scale.
3. *Revised Children Manifest Anxiety Scale* (RCMAS) (Reynolds, 1978) measures the level and nature of anxiety using a 37-item scale.
4. *Hopelessness Scale for Children* (HSC) (Kadzin et al., 1986) a 17-item self-report measure.
5. *Interpersonal Competence Scale* (ICS-T) (Carins et al., 1995) teacher ratings of children's social and emotional qualities, 18-item scale.

6. *Scale for assessing academic stress* (SAAS) (Sinha et al., 2001). 30-item self-report measure to assess academic stress.

Pre-intervention scores on outcome measures revealed that participants had clinically significant internalising behaviour problems, significant levels of depression, low self-esteem and considerable social anxiety. Teacher ratings provided collateral for high levels of internalising difficulties. Comparisons of pre/post intervention scores show clinically significant improvements for all outcome measures. Findings suggest that MBCT is an effective intervention for internalising problems and participants were found to be accepting of mindfulness treatment, evidenced by high attendance and retention rates.

WoE 'A' is rated 'low' due to the absence of comparison or control group. WoE 'B' was rated 'medium' as lasting benefits of the intervention cannot be evaluated due to lack of follow-up data. WoE 'C' was rated 'high' as the intervention targeted participants with psychological difficulties of close comparison to this systematic review. However small, homogenous sample- Indian adolescents affected by HIV, limits the external validity to other populations. As such, further research is necessary to determine whether other sample populations would demonstrate similar benefits. The overall weighting WoE 'D' is low.

Study four: Bluth and colleagues (2015) conducted a quasi-experimental investigation to explore the acceptability and psychosocial effects of a MBI for a targeted group of at-risk adolescents.

33 students, Grade 9-12, attending an alternative high school in California for "high risk"[28] adolescents were screened for eligibility. Following attrition, 27 students (average age=17, *SD*= 14-18) were randomly allocated to either a mindfulness group (n=14, male n=8) or a substance abuse class (control) (n=13, male n=8).

- Mindfulness group: Students participated in Learning to Breathe mindfulness curriculum (L2B) which was adapted in the following way to meet the specific education setting; 11 sessions, shortened mindfulness practices and included 'restorative yoga'[29]
- Control group: Students received an evidence based substance abuse class (Smith et al., 2006) on the same day and time as the mindfulness group.

Acceptability was assessed using the credibility scale (Borkovec and Nau, 1972), a 5-item scale that measures participants' perception that the intervention is effective in improving outcomes. Psychosocial well-being was evaluated using the following measures:

- *Self-Compassion Scale-Short Form* (SCS-SF; Raes et al., 2011) 12-item self-report measure, which assesses participant's felt self-compassion.
- *Social Connectedness Scale* (SOC; Lee & Robbins, 1995) 8-item scale that assesses interpersonal connectedness and sense of belonging.
- *Short Mood and Feelings Questionnaire* (SMFQ; Angold et al., 1995) 13-item scale that assesses depression in children and adolescents.

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[28] Out of 33 students 23% accessed mental health support and 87% were struggling academically.

[29] Yoga session of the L2B curriculum was adapted to include deep relaxation (i.e. body is supported by bolsters/cushions and relaxing music is played.)

- *Child and Adolescent Mindfulness Measure* (CAMM; Greco et al., 2011) outlined in study two (Tan & Martin, 2015).
- *Spielberger State-Trait Anxiety Inventory* (STAI) 6-item short form- outlined in study one (Biegel et al., 2009).
- *Perceived Stress Scale* (PSS Cohen et al., 1983) outlined in study one (Biegel et al., 2009).

Group improvements (L2B versus control) were compared based on their change scores (pre to post intervention) with Mann-Whitney-Wilcoxon tests and calculated effect sizes. Results highlighted a significant reduction in depression (SMFQ) for students who accessed the intervention (p=0.03) and a large effect size (Hedges g= -1.26). While no significant difference was found between the change scores of the L2B and control group on the remaining psychosocial outcomes, the L2B group did show reduced anxiety compared to controls. Analysis of acceptability and feasibility was indicated by an increase in L2B credibility scores from pre to post-intervention, notable attendance rates at L2B sessions (81.8% attending < 8 sessions) and positive qualitative feedback.

WoE 'A' was rated 'medium' as the specific factors that determined group participants as "high-risk" were not reported. WoE 'B' was rated 'medium' as multi-informant measures (i.e. teacher feedback) were obtained anecdotally rather than formally, which would have strengthened the assessment of intervention feasibility. WoE 'C' was rated 'medium' as students' internalising difficulties were not assessed/confirmed to be within a clinical range, thus are not directly similar to the participant characteristics relevant for this review. A major strength of this study is the inclusion of detailed programme implementation and reported feasibility within an

alternative school setting. This offers encouragement for future studies of mindfulness with at-risk youth in different education settings. An overall weighting WoE 'D' of medium is given.

1.11.2 Systematic Literature Review Findings

For an overview of key information derived from each study, see Appendix 4. The following sections highlight important comparisons across studies.

Intervention programmes

Mindfulness interventions implemented in the 4 studies were adaptations of adult MBSR programmes (Biegel et al., 2009) or MBCT (Sinha & Kumar, 2010) or mindfulness based interventions designed specifically for adolescents; Learning to Breathe (Broderick & Metz, 2013) and Taming the Adolescent Mind (Tan & Martin, 2012a).

Intervention programme duration

The number of sessions delivered in each intervention varied, with the minimum number reported as 5 (Tan & Martin, 2015) and the maximum number reported as 12 (Sinha & Kumar, 2010). Sessions were delivered once a week in all but one study, where sessions were cancelled due to school scheduling issues (Bluth et al., 2015). The duration of sessions were described in three studies and ranged from 1 hour (Sinha & Kumar, 2010) to 2 hours (Biegel et al., 2009).

Study designs

3 of the studies assigned adolescents to different groups (e.g., mindfulness or control) with 2 of these studies employing a randomised clinical trial design (Biegel et al., 2009; Martin & Tan 2015) and one quasi-experimental design (Bluth et al., 2015).

One study employed a non-experimental, non-controlled pre-test/ post-test design (Sinha & Kumar, 2010).

Control groups

Control conditions were implemented in 3 studies. 2 of these evaluated mindfulness as an adjunct treatment for mental health, enabling comparison of mindfulness training to treatment as usual (Biegel et al., 2009; Tan & Martin, 2015). One study used an "active control" condition, which highlighted the comparative effectiveness of mindfulness in the reduction of depressive symptoms (Bluth et al., 2015).

Age range

All studies reported some description of participant's age and were comparable across the 4 studies, ranging from 13-18 years. This age group maps onto the age range of interest to the current study (i.e. secondary school aged students).

Intervention facilitators

3 of the studies described the characteristics of facilitators including; psychology post-graduate students, clinical psychologist and CBT therapist, and mindfulness instructor. Only one study reported the intervention leader to be a "mindfulness practitioner" with extensive experience (Bluth et al., 2015).

Outcomes measured

The studies assessed a broad range of primary psycho-social/social-emotional measures, relying predominantly on self-report questionnaires. The outcomes of relevance to the review question included anxiety, depressive symptoms, stress, self-esteem, mindfulness, and third person ratings of social/emotional functioning and clinical rating of diagnoses.

All 4 studies reported significant decreases in depressive symptoms attributable to mindfulness training. 3 out of 4 of these studies found statistically significant improvements in anxiety[30]. Of the 3 studies that examined changes in stress, 1 study showed improvements in perceived stress, compared to controls and another showed improved academic stress post-intervention. 3 studies examined changes in self-esteem, with 2 reporting significant increases compared to controls and 1 reporting significant decrease in negative self-esteem post-intervention (Sinha & Kumar, 2010). Significant increases in self-reports of mindfulness skills were reported by Tan & Martin (2015) yet only moderate differences were reported by Bluth et al., (2015), compared to active control group. 3 studies examined third person ratings of change and all studies indicated improvements in emotional and psychological functioning. The small to moderate change scores in mindfulness, anxiety and stress, reported in Bluth's (2015) study were attributed by the authors to a small sample size. Tan & Martin (2015) were the only study to examine changes in resiliency and psychological flexibility, reporting insignificant results for resiliency and significant change in psychological flexibility, owing to the emphasis on attention and acceptance inherent in mindfulness teaching.

1.11.3 Conclusions and Directions for Proposed Study

The conclusions drawn from the studies reviewed provide a promising yet small evidence base for mindfulness as a psychosocial intervention to enhance emotional well-being and mental health for emotionally distressed adolescents.

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[30] Bluth et al., 's (2015) study found large improvements in anxiety relative to controls, however the effect sizes were small for anxiety, based on change scores.

An important limitation of this review is that the included studies, based on pre-determined criteria, are all published articles; which increases the likelihood of publication bias. These conclusions are thus tentatively drawn due to the limited research in the particular area, which may suggest that further research is warranted. This point will now be discussed in further detail.

Firstly, none of the studies selected included participants from Great Britain, Northern Ireland or Ireland. Therefore the encouraging results found in these studies may have limited generalisability to secondary school students in the UK. This highlights the need for mindfulness interventions, designed outside of the US/Asia, to be evaluated for adolescents experiencing internalising and/or social-emotional difficulties.

Secondly, while a range of participants with varying degrees of mental health difficulties received mindfulness as an intervention across these studies, there is no empirical evaluation of a mindfulness programme for adolescents referred for ABSR. This emphasises the opportunity for exploratory research to investigate the efficacy of teaching mindfulness to reduce internalising problems and enhance psychological health for this population.

Thirdly, while the studies provide support for the positive effects of mindfulness on psychological outcomes, none of the studies explored *how* participants experience these effects. Bluth et al.,'s (2015) study does include participant feedback in the assessment of the acceptability of mindfulness interventions yet the data is not formally analysed. Therefore within the parameters of this review, more qualitative research is needed to explain the quantitative effects of

the intervention and how mindfulness training brings about change in psychological outcomes.

In summary this literature and systematic review provide a basis and rationale for exploring the impact of teaching mindfulness to students referred for ABSR. While there is, to the best of the author's knowledge, no research investigating the use of mindfulness interventions with this student group, the research literature recognises the need for alternative psychosocial interventions which promote and maintain facilitative factors, such as experiencing greater well-being and coping with emotional difficulties. The .b programme is not however proposed as a stand-alone "treatment" for school refusal, but aims to teach students how to respond to private experiences (thoughts, feelings and body sensations) with mindful awareness, and in turn develop psychological flexibility skills to cope with the emotional distress that attending school is currently causing them. Introducing mindfulness as part of their EOTAS provision thus offers students a "tool for life" which they can return to in later life if they choose to do so[31]. The importance of school-based support has also been noted, thus exploring the acceptability and feasibility of embedding this programme within the school setting will help develop 'practice-based evidence" for implementing group-based interventions.

The topics for investigation are therefore as follows:

1. Can participation in the .b programme curriculum reduce participants internalising problems and increase emotional well-being?
2. Do participants learn to be more mindful and psychologically flexible over the course of the study?

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[31] https://mindfulnessinschools.org/what-is-b/b-curriculum/

3. Do parents and teachers report changes in students internalising problems?
4. How do participants experience the .b programme and do they perceive positive changes as a result of taking part?

1.12 Research Question

The overall title of the current study is: "A mixed methods feasibility study examining the impact of introducing mindfulness to students referred for anxiety based school refusal". The research title is composed of two main research questions, which are:

1.

a) Do adolescents, referred for ABSR, self-report a decrease in internalising problems (emotional distress and peer difficulties) and improvements in well-being, psychological flexibility and mindfulness; following participation in the .b programme over time (post-intervention and 5-month follow up).

b) Do parents and teachers perceive students internalising problems to reduce after taking part in the .b programme post intervention and at 5-month follow up?

2.

What are participant's views of taking part in the programme and what changes to they perceive are attributable to learning mindfulness?

Part 2

Empirical Paper

A Mixed Methods Feasibility Study Exploring the Impact of Introducing Mindfulness to Adolescents Referred for Anxiety Based School Refusal

2.0 Empirical Paper

2.1 Abstract

This study investigated the impact of a mindfulness training programme **".b, Stop-Breathe-Be"** on adolescent's ratings of mindfulness, well-being, internalising difficulties and psychological inflexibility. Eight students attending Education Other than at School (EOTAS) provision, referred due to their experience of anxiety-based school refusal (ABSR) participated in the study. Adolescents, aged 14-16, participated in the 9-week .b programme, delivered by a trained .b facilitator, the author of this study. Evaluation involved a mixed method approach with two distinct phases. Phase one followed a quantitative single-group design. Students, parents and teachers completed a range of pre, post and follow up report measures enabling a triangulation of data. Phase two followed a qualitative approach, using semi-structured interviews post-course and at follow-up to explore students' experience and the processes of change over time. Results showed statistically significant increases in students' ratings of mindfulness and reductions in emotional symptoms as rated by parents and students, supported by large effect sizes. Teacher's ratings of peer problems also significantly decreased and increased well-being is indicated by a medium effect size. There was no statistically significant change found in students' ratings of psychological inflexibility over time. Thematic analysis lead to the development of three themes; 1) '*initial perceptions*' captures participants' initial responses to the programme 2) '*discovering and experiencing the practice*' describes participants' engagement with mindfulness; reporting enjoyment, calmness and increased sensory awareness 3) '*insight and application*' includes participants' effective use of

mindfulness. Potential mechanisms are also identified and facilitate changes in cognitive and coping responses. Findings provide preliminary support for the feasibility and potential usefulness of introducing mindfulness to adolescents with ABSR as a complementary therapeutic approach for reducing emotional symptoms and enhancing their well-being at school.

2.2 Introduction

2.2.1 Anxiety Based School Refusal

School is considered one of the main environments in which children learn essential skills to enable them to function in society and thus has a long-term impact on their development (Pellegrini, 2007; Greenberg, 2010). However there is a minority of students who experience school non-attendance for a prolonged period of time and in these cases it is perceived as severely disruptive and a cause for concern (Gregory & Purcell, 2014). The classification of school non-attendance appears to vary, with some authors using the term "school refusal behaviour" which includes problems of truancy (Kearney & Silverman, 1996) and others using the term "school refusal" which is associated with emotional distress rather than anti-social behaviour (King & Bernstein, 2001). In the field of Educational Psychology research some authors have chosen to use more neutral terms such as "extended school non-attendance" (Pellegrini, 2007) and "chronic non-attendance" (Lauchlan, 2003). For the purpose of this introduction the term "school refusal" is used, implying an emotional difficulty with school attendance as distinct from truancy (Heyne & King, 2003). The term anxiety-based school refusal (ABSR) is referred to in subsequent

sections, due to the use of this term by Educational Psychology Services (EPS) in defining the criteria for referral to the EOTAS provision in this current study.

The prevalence of school refusal is also difficult to ascertain, varying according to the sample studied, methodology used and criteria for school refusal (Maynard et al., 2015). Overall estimates are reported to be relatively low; between 1% to 2 % of the general school-aged population (Heyne & King, 2003). In terms of age, higher referral rates for school refusal are reported during pre-adolescence and adolescence, relative to early and middle childhood (Heyne & King, 2003). There is substantial heterogeneity in the presentation of school refusal and while not all will meet the criteria for a diagnosis, school refusers appear to be more vulnerable to the experience of anxiety, depression and associated social difficulties (Elliott, 1999). A broad range of anxiety disorders have thus been reported in clinically-referred school refusers as well as depressive disorders (Elliott, 1999). However the relationship between school refusal and anxiety related or depressive symptoms remains unclear, for example whether school refusal precedes or is an outcome of these problems (Kearney, 2001). While some cases of school refusal can be self-corrected, clinical experience and research evidence suggests in the absence of effective intervention school refusers continue to display problematic school attendance, which can result in significant adverse outcomes such as school dropout, social adjustment problems and restricted occupational opportunities (Maynard et al., 2015).

Of the range of intervention approaches used with school refusers (e.g., pharmacotherapy, family therapy, psychodynamic therapy, cognitive and behavioural therapies) cognitive behavioural therapy (CBT) is considered the most robustly

studied with some supportive evidence from randomised controlled trials of CBT interventions (King & Bernstein, 2001).

Maynard et al.'s (2015) recent systematic review of psychosocial interventions for school refusal included eight studies, seven of which were a variant of CBT. The findings from this review are mixed, showing a significant effect of CBT on attendance yet a non-significant effect on anxiety post-intervention. The authors conclude that the current evidence for CBT is tentative and overall there is insufficient evidence to conclude whether CBT is the treatment of choice for school refusal.

2.2.2 Emotional Mental Health and Well-being

Mental health and well-being is considered fundamental to all young people, enabling them to get 'through tough times, make a difference and be an asset to their community' (O'Reily, Illback, Peiper, O'Keeffe & Clayton, 2015, p. 2). On this basis the prevention and treatment of mental health difficulties is regarded as a vital concern for individuals, communities and societies throughout the world (World Health Organisation, 2014[32] ; Greenberg, Fomitrovich & Bumbarger, 2001). Taking the UK as an example, estimates of prevalence indicate that 1 in 10 young people, aged 5-16, have a mental disorder[33]. Over a third of these are identified as having an emotional disorder, i.e. anxiety and depression, with the rates rising steeply in middle to late adolescence. These statistics are concerning as mental health difficulties at all levels are associated with negative consequences, including peer relationship problems, school dropout and poor achievement in adult life (Challen, Noden, West

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[32] Mental Health: strengthening our response http://www.who.int/mediacentre/factsheets/fs220/en/
[33]http://www.publications.parliament.uk/pa/cm201415/cmselect/cmhealth/342/342.pdf

& Machin, 2011; Schonert-Reichl & Lawlor, 2010). Schools are increasingly responding to the need to promote mental health, by incorporating social and emotional learning (SEL) into the curriculum and taking a 'holistic' approach to education, beyond the traditional focus of academic achievement (Department for Education and Skills, 2006). The promotion of emotional health and well-being in a school context is thus intended to ' help pupils understand and express their feelings, build their confidence and emotional resilience and therefore their capacity to learn' (DfES/DoH 2005 in Connolly et al., 2011). Education provision has tended to support initiatives where *universal preventive interventions*, which target whole populations, are supplemented by *targeted interventions,* considering students at risk, and *intensive interventions,* for those already experiencing mild to moderate disorder, operating at three levels to improve outcomes for all (Wolpert, Humphrey, Belsky, & Deighton, 2013).

Interventions at school are increasingly recognised as being effective for school refusal, as creating "positive experiences for the young person can help make the school environment a more reinforcing place to be" (Heyne & King, 2003, p. 264). The importance of a supportive school environment in fostering positive psychological factors is reported in Nuttall & Wood's (2014) qualitative study of school refusal. Successful school reintegration appeared to be enhanced through the interaction of child, psychological and systemic factors (e.g, school and family) some of which include "*developing an understanding of thoughts, feelings and behaviour*", building *"confidence, self-esteem and values"* and fostering "*feelings of safety, security and belonging*". A specific focus on the young person's efforts at coping and building resilience, within a supportive environment, thus shifts the perspective from

"within the child", as the cause of the problem. It is within this focus that mindfulness is suggested as a possible complementary approach to enhance well-being and support students experiencing emotional distress due to school refusal.

2.2.3 Mindfulness and Well-being

Mindfulness is thought to originate from Buddhist philosophies and practices yet in recent years it has become secularized to suit Western cultures, with a growth in the use of mindfulness-based interventions (MBIs) in both medical and educational settings (Hart, Breton & Reavill, 2014). Mindfulness is described as a "mode of being" that is rooted in paying attention, non-judgmentally, to the present moment and our current experience of the world (Jones, 2011). The most common mindfulness practices involve consciously paying attention to current sensations, perceptions and experiences and this is proposed to reduce the degree of identification with the endless flow of thoughts, judgments and rumination (Dorjee, 2010). To explain how mindfulness affects positive change Shapiro, Carlson, Astin and Freedman (2006) propose a model consisting of three core components 1) Intention 2) Attention, and 3) Attitude; which when cultivated can facilitate a *"shift in perspective"* (p.378), leading to further changes such as self-regulation and cognitive-behavioural flexibility. With regard to psychotherapeutic mechanisms it has been suggested that mindfulness involves exposure to unwanted thoughts/sensations and a changing attitude towards them, marked by acceptance rather than avoidance, resulting in increased relaxation and improved coping strategies (Baer, 2003).

Increasing studies are showing MBIs to be generally effective for a range of psychosocial difficulties in adult populations (Khoury et al., 2013, Baer, 2003) and

emerging literature suggests they may be beneficial for young people (Zoogman, Goldberg, Hoyt & Miller, 2014). While the evidence base for mindfulness with young people is still in its early stages, a growing number of studies are indicating improved psychological functioning in school-based settings (Kuyken et al., 2013; Liehr & Diaz, 2010; Mendelson et al, 2010) and research with clinical populations are showing lower levels of emotional problems (i.e. internalising problems, anxiety and depression) in adolescents with mixed mental health disorders (Tan & Martin, 2015;Sinha & Kumar, 2010; Biegel, Brown, Shapiro, & Schuburt, 2009). While much of the initial research seems to have focused on the alleviation of negative disorders and emotions, possibly due to the urgency and immediacy of the problems these present (Seligman & Csikszentmihalyi, 2000), studies also highlight positive effects of mindfulness training on well-being, quality of life and self-esteem (Kuyken et al., 2013; Tan & Martin, 2015). Recently Zoogman et al.'s (2014) meta-analysis of mindfulness interventions with young people identified "the promise of mindfulness for symptom reduction in youth clinical settings" making the point that this population "has yet to benefit from the broadening dissemination of mindfulness" (p. 299). While the extant outcomes are encouraging they are limited by the overall small number of studies (n=20) as well as study-design factors identified in previous systematic reviews, including small sample sizes, lack of comparison and/or active controls and random assignment (Felver et al., 2016; Black et al., 2009).

2.2.4 Mindfulness Programmes with Adolescents

Adolescence is considered by some authors to be an appropriate time to introduce mindfulness, due to increased mental health vulnerabilities at this stage of development as well as the potential for fostering protective factors such as resilience

and enhanced positive emotions (Schonert-Reichl & Lawlor, 2010). It is also suggested that this stage of cognitive development is well suited to receive the benefits of mindfulness interventions, due to the increased use of meta-cognitive and abstract thinking skills during adolescence (Zoogman et al., 2015). In light of this specific mindfulness programmes for adolescents have been developed including Mindfulness Education (ME) (Schonert-Reichl & Lawlor, 2010) and Learning 2 Breathe (Broderick & Metz, 2009). In the UK the Mindfulness in Schools Project (MiSP) has developed the '.b curriculum' as a universal programme for young people, delivered in the classroom or within other youth related settings (Iyadurai, Morris & Dunsmuir, 2014). Training to deliver the .b programme in schools requires teachers to have at least eight weeks training in MBSR or MBCT, an established mindfulness practice and attend a four-day training course. The goal of the .b programme is to help young people "overcome difficulties, thrive and flourish" and it aims to achieve this by teaching mental skills and emotional regulation through the practice of mindfulness. The lessons are designed to make the principles and practices relevant to the lives of adolescents, offering a "toolkit" to deal with stress and anxiety.[34]

An important large scale randomised controlled trial published by Kuyken et al. (2013) shows promise for the efficacy of the .b programme, demonstrating significant results for increases in well-being, reduced stress and lower depression for those in the .b group, relative to controls and these results were sustained at a 3-month follow-up. These findings add to preliminary indications of the acceptability and efficacy of delivering the .b programme in school settings (Huppert & Johnson, 2010; Hennelly (2011). Given the aims and objectives of the programme, it's preliminary

[34] See https://mindfulnessinschools.org/what-is-b/b-curriculum/

evidence base and delivery in a school-based setting, it is suggested that the .b programme presents a worthwhile intervention that may assist adolescents in coping with the challenges of school attendance. It is also a fruitful area for research evaluation as to date there has been no published studies of the use of the .b programme for targeted or clinical groups of adolescents, including those experiencing ABSR.

2.2.4 Rationale for the Current Study

The research base indicating the effectiveness of mindfulness interventions with adolescents continues to grow yet overall the literature has been characterised as 'most frequently addressing non-clinical populations in school settings' (Zoogman et al., 2014, p.292). The few studies to involve adolescents experiencing mental health difficulties show that mindfulness may be potentially efficacious as a psychosocial treatment to enhance psychological health, particularly by reducing symptoms of anxiety and depression (as identified in the preceding systematic review conducted as part of this thesis). Taken together this current study aims to extend the research by delivering the .b programme to adolescents referred for ABSR, something which to the best of the author's knowledge has received no research attention to date.

CBT appears to be most rigorously evaluated intervention for school refusal and while studies report clinically and statistically significant improvements in school attendance (mean effect size g=0.54), there is also evidence to suggest CBT is limited in the strength of reducing internalised anxiety[35] symptoms for this population (g =0.06 (Maynard et al., 2015). Some commentators have also drawn attention to the

[35] Anxiety is reported to be the primary measure of emotional distress used in most studies of school refusal (Maynard et al., 2015)

relative lack of evidence for non-CBT interventions for school refusal (Heyne & King, 2003) therefore this current study attempts to investigate the feasibility and acceptability of a mindfulness as a component intervention approach for ABSR.

2.2.5 Research Aims

The primary aim of the current study was to investigate the effects of teaching the .b programme on mindfulness, internalising symptoms, psychological inflexibility and well-being in a sample of adolescents referred for ABSR. Changes in teacher and parent ratings of students' internalising symptoms, i.e., emotional distress and peer problems, following participation in the .b programme will also be examined. Secondary aims of the study was to investigate students' individual experience of participating in the programme and explore any potential mechanisms of change attributed to learning mindfulness. Qualitative data was also intended to assess the acceptability and feasibility of teaching mindfulness to adolescents with ABSR in an EOTAS setting. Following from this, the overarching aim of this research is to:

> "Investigate the effects of participating in a mindfulness programme for secondary school aged students referred for anxiety based school refusal"

This will be achieved by using a mixed method approach with two distinct phases to address the following research questions:

1.

a) Do adolescents, referred for ABSR, self-report decreases in internalising problems (emotional distress and peer difficulties) and improvements in well-being, psychological inflexibility and mindfulness following participation in the .b programme over time (post-intervention and 5-month follow up).

b) Do parents and teachers perceive students' internalising problems to reduce after taking part in the .b programme over time?

2.

What are participant's views of taking part in the programme and what changes to they perceive are attributable to learning mindfulness?

2.3 Methodology

2.3.1 Theoretical Perspective

This research adopted a critical realist approach (Bhaskar, 2013) which is considered to be a middle ground between positivism and constructivism (Robson, 2002). Braun and Clarke (2006, p. 5) state that in order to aid the rigour and validity of any research it is crucial that the 'researcher makes their (epistemological and other) assumptions explicit'.Within critical realism there are two broad beliefs on the nature of reality (ontology); reality and knowledge exist independently of human thought, yet there cannot be one objective truth about the world (Maxwell, 2012).

Critical realism thus presents an ontological position that a) accepts knowledge is impacted on and influenced by an individual's interpretation of it and b) acknowledges there are multiple understandings and realities of the world due to varying human interpretations and perspectives (Robson, 2002). This theoretical position has been consciously taken into consideration and supports the use of the methodological strategies for this research which are outlined in the following sections.

2.3.2 Design and Hypotheses

The central research questions influenced a mixed method design, employing both quantitative and qualitative approaches. Creswell (2009, p.201) highlights how the mixed method strategy utilises the strengths of both quantitative and qualitative approaches as 'their combined use provides an expanded understanding of research problems'. The study sits within the category of a mixed methods sequential explanatory design, with two phases: quantitative phase followed by the qualitative phase (Creswell & Plano Clarke 2010). In this study quantitative methods take priority over qualitative methods, with more weighting placed on the student, teacher and parent report dependent measures to assess the broad effects of the intervention. Qualitative methods are used to help expand quantitative findings, providing a more in depth and comprehensive understanding of how participants experienced the intervention and whether changes could be attributed to learning mindfulness. The qualitative and quantitative results are brought together or "merged"(Creswell, 2009) in the overall interpretation and analysis of the findings, i.e. the discussion section. The timing and interaction of these phases is presented in Figure 2.1

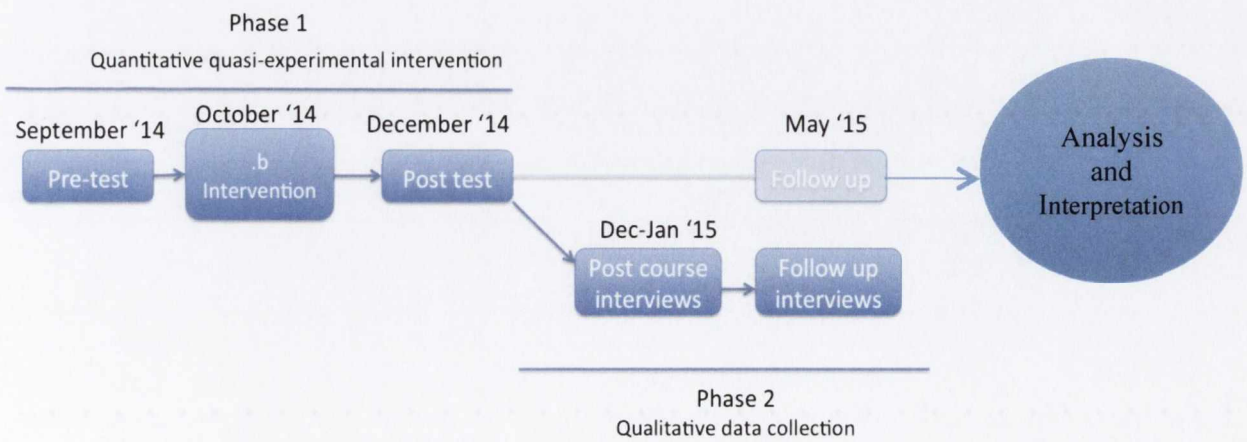

Figure 2.1 Timing of mixed method sequential design

Phase one follows a quasi-experimental i.e.pre-test post-test, single group design. Students who participated in the .b intervention completed self-report measures pre and post intervention and at 5-month follow up. Parent and teacher ratings of student emotional symptoms and peer problems were also completed. The following directional hypotheses were undertaken for this study:

Primary hypotheses

A. *Participants in the .b intervention will report significant reductions in internalising problems (emotional symptoms and peer problems) over time, i.e. pre-test, post-test and follow up.*
B. *Participants will report statistically significant increases in mindfulness over time.*
C. *Participants will report statistically significant decreases in psychological inflexibility over time.*
D. *Participants will report statistically significant increases in well-being over time.*

Secondary hypotheses

A. *Parent ratings of participant's internalising problems (emotional symptoms and peer problems) will significantly decrease over time, i.e., pre-test, post-test and follow up.*

B. Teacher ratings of participants internalising problems (emotional symptoms and peer problems) will significantly decrease over time.

Phase two follows a qualitative design, employing the use of semi-structured interviews with participants to gather in depth information of their experience of participating in the .b programme. 5-month follow up interviews were conducted with participants to further explore the effects of learning mindfulness and how mindfulness brings about or sustains these effects. Qualitative data is also used to gain an understanding of the acceptability and feasibility of the .b programme.

Combining quantitative and qualitative methods is thought to offer a more complete set of findings then could be arrived at through employing one method alone and thus enhances our confidence in the results (Bryman, 2008). In the case of this study triangulation of *data* (through the use of multiple informants) and *methods* (questionnaires and interviews) is used to examine the consistency of findings from different perspectives and to identify the distinct facets of learning mindfulness, including experience, effects and potential change.

Following the sequential explanatory approach quantitative data is analysed first and the qualitative data is analysed second. Creswell & Plano-Clarke (2010) advise that quantitative and qualitative findings are initially analysed independently and then merged in the interpretation phase of the study, thus the two sets of findings are separate but connected. The rationale for this approach is that the quantitative data provides a preliminary understanding of the research questions and the qualitative data is used to explain and elaborate on quantitative results by exploring participants views in more depth. The results are then reported in a sequence, i.e., quantitative

followed by qualitative, and an overall discussion and narrative is developed by combining and comparing both sets of findings.

2.3.3 Participants

Participants were selected purposefully due to their experience of the phenomenon of interest, i.e., anxiety based school refusal. Eight students, who were currently enrolled in an EOTAS provision, referred for ABSR, participated in the .b programme (3 male, 5 female), following the agreement of the Principal, Vice Principal (V.P) and parents/carers to take part in the study (See Appendix 5). At the time of study commencement, two participants were aged 15 and six were aged 16. One participant was in Year 11 while the remaining seven students were in Year 12 and had attended the EOTAS for at least 6 months in Year 11. Each participant was also attending CAMHS as part of their EOTAS provision; this will be further explained in the critical reflection section. Eight parents provided data at pre-testing, seven at post-testing and two at follow up. Due to this low response rate, follow up data for parent outcome variables could not be subjected to statistical analysis. Participants also included four teachers who provided their informed consent to complete teacher ratings of internalising problems. Details of participant flow are presented in Figure 2.2.

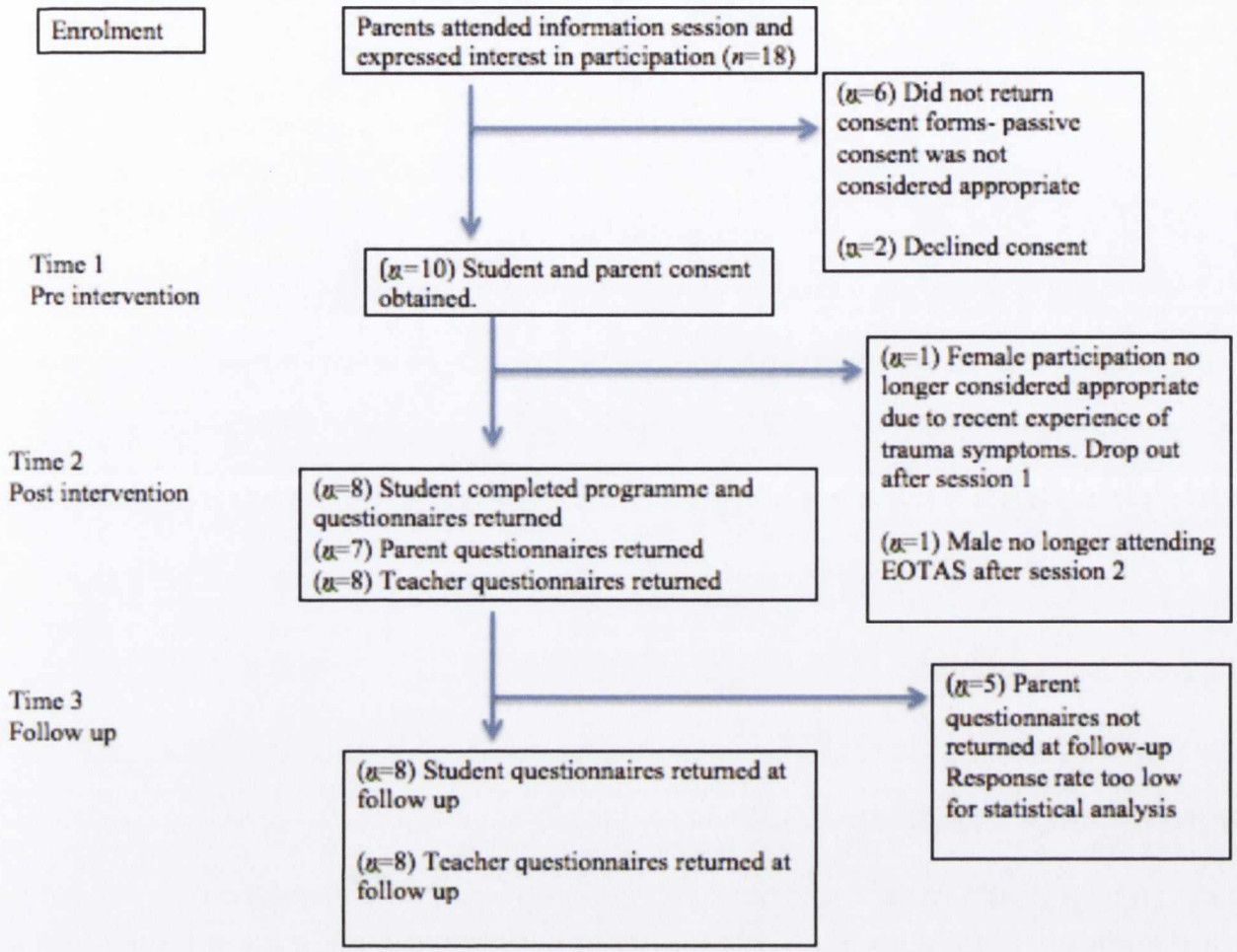

Figure 2.2 Diagram of participant flow throughout the study

2.3.3.1 Student and parent information sessions. An information evening for parents of participants was delivered as part of the orientation to the EOTAS at the start of the school year, i.e., September. This session included a brief presentation of the .b programme and an explanation of the research study. Parents were informed of the consent procedures for students' participation and given information about the study (See Appendix 6). This session enabled parents to ask questions about the study and enhanced the possibility of informed parental consent.

A student information session was also provided for those students for whom parental consent had been provided. Students were given the same presentation as parents and were given the opportunity to ask questions about the study. This session allowed students to make informed decision regarding their consent for participation.

2.3.3.2 Consent and ethical approval. Parents who felt they would like to participate signed a consent form (Appendix 6) agreeing for their son/daughter to a) participate in the intervention, b) to complete self-report measures and post intervention interviews, c) to complete parent questionnaires. Students' assent was also sought (Appendix 7)[36] to indicate that they were willing to a) attend the intervention, b) complete post intervention self-report measures and participate in interviews. Similarly consent was obtained from teachers (See Appendix 8) to complete pre, post and follow up intervention measures for participating students. Participants who consented to the study were informed of their voluntary participation and their right to withdrawal any time.

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[36] One female student requested to withdraw from the study due to unsuitability, i.e. recent experience of trauma symptoms. This was managed with the advice and support from Vice Principal and Occupational Therapist.

This study complies with the ethical standards set forth by the School of Psychology, Queen's University Belfast, which is informed by the British Psychological Society Code of Ethics and Conduct (2009) (Appendix 9). A Risk Assessment Protocol was also developed and supported the ethics submission to provide a consistent approach to identification and reporting of risk. This included ensuring that where young people are identified as at risk, disclose abuse or at significant risk of harm appropriate safeguards, disclosures and referrals are put in place in a timely way. A protocol was also developed to manage potential psychological distress over the course of the programme implementation and data collection (Appendix 10). This was reviewed and agreed by key staff members i.e., Vice Principal and Occupational Therapist.

2.3.4 The Intervention and Procedure

The mindfulness course ".b" [dot-be], created by MiSP was used. The MiSP goal is to enable adolescents to learn mindfulness skills that enhance mental regulation and executive control across the spectrum of risk/resilience. The curriculum is drawn from mindfulness-based stress reduction (Kabat- Zinn, 2003) and has been adapted for use with adolescents, i.e. developmentally appropriate language and materials. The curriculum involves a set of 9 scripted lessons, which last approximately 45-50 minutes. The programme was delivered weekly in the EOTAS centre by the researcher, who is a trained .b teacher, with a member of staff present[37]. In terms of procedure the time line presented in Figure 2.3 highlights the teaching

[37] A CAMHS Occupational Therapist (OT) attended the first two sessions as a 'helper'. The OT did not attend the remaining sessions as it was discussed that students might engage more openly in the absence of a staff member. The OT remained on site and 'at hand' for the duration of the 9 sessions.

schedule and data collection points. Overall the group were in contact from September 2014 to May 2015. Table 2.1 provides an overall view of the programme structure and focus of each session[38] and Table 2.2 gives an example of the flow of individual sessions. Further information and overview of the 9-session .b mindfulness curriculum is presented in Appendix 11.

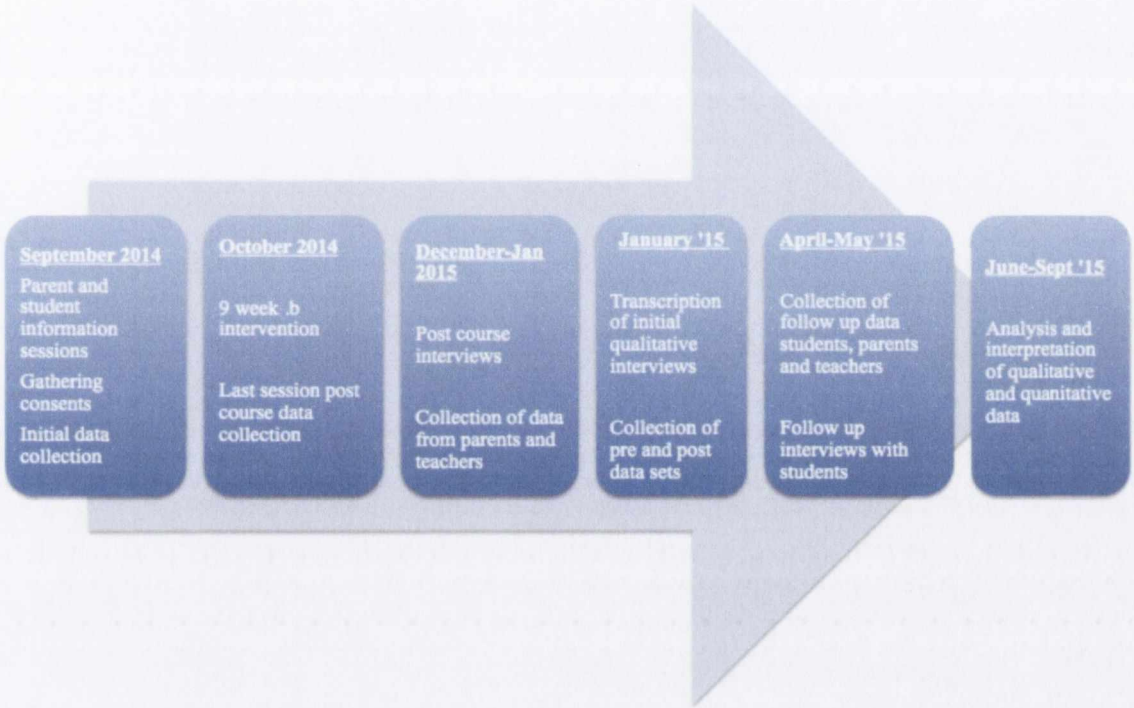

Figure 2.3 Teaching schedule and data collection points

[38] http://mindfulnessinschools.org/what-is-b/nine-lessons/

Table 2.1

Programme structure and focus of sessions

Session number	**Focus**
Introductory session	Proposes that mindfulness is worth learning about by making it relevant to the lives of young people
Lesson One-"Playing Attention"	Introduces students to the concept of attention and how, like a puppy, it needs to be trained
Lesson Two- "Taming the Animal Mind"	Explores different mind states and teaches that anchoring 'attention' in the body with curiosity and kindness can be calming
Lesson Three-"Recognising Worry"	Explains that the tricks our mind plays on us can lead to stress and anxiety; we interpret, ruminate and catastrophise, and gives us techniques to deal with them
Lesson Four- "Being Here Now"	Teaches how to step out of 'autopilot' and to respond rather than react to whatever happens in our lives
Lesson Five- "Moving Mindfully"	Shows us how we can bring mindfulness to everyday activities, such as sport, and how it can help us achieve a state of "flow" or to "get in the zone"
Lesson Six- "Stepping back"	Offers a new way of relating to thoughts and suggests we don't have to let them carry us away to places we'd rather not be
Lesson Seven-"Befriending the Difficult"	Learning how to accept and "be with" difficult emotions
Lesson Eight-"Taking in the Good"	Focuses on gratitude and taking in what is 'good' in life
Lesson Nine "Pulling it all together"	Consolidates the key techniques from .b and inspires students to use what they have learned in the future

Table 2.2

Flow of individual sessions

Lesson 3 "Recognising Worry"	**Content**
11:15-11:20	Shared ground rules and **group check in**
11:20-11:25	**7/11 practice** as a way of 'un-worrying' 'Thinking' versus 'Being' mode
11:25-11:35	Present scenario to show how the mind interprets, ruminates and catastrophises. **"Middle of the night" thinking.**
11:35-11:45	**Psycho-education**; fear, anxiety, rumination. **Highlighted in video clip.** Introduce the '**hot cross bun effect'-** thoughts, feelings, bodily sensations and actions are related and affect each other
11:45-11:55	Practice **'Beditation[39]'**, as a way of taking the mind out of ruminative cycles by directing it to **what is happening** rather than **what might be happening**
11:55-12:00	Access to Beditation sound file/CD **Questions and comments**

2.3.5 Phase One - Quantitative Measures

The .b programme has broad, related aims and the impact is wide ranging. It was therefore appropriate to measure a set of outcomes using multi-method and multi-informant measures. In line with the research aims outcome measures were selected because of their acceptability, reliability and validity, balanced with consideration to minimise burden on both participants and the researcher while maximising data quality. All instruments used were self-report measures (see Appendix 12) and were completed by students, parents and teachers at three time points, pre, post and five month follow up.

[39] The "Beditation" practice involves directing attention to bodily sensations while lying down. Students are encouraged to practice this exercise before bed using a sound file to guide them through the routine

Social and Emotional functioning

The Strengths and Difficulties Questionnaire (SDQ) is a brief screening questionnaire and is a widely used for assessing mental health problems (Goodman, 2001). This was selected to gain a multi-informant perspective of adolescent emotional functioning. There are several versions of the SDQ including a parent form, a teacher form and a self-report form. 25 items assess the following 5 domains: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and prosocial behaviour. Validation studies demonstrate positive correlations with other measures of internalising and externalising problems, such as the Child Behaviour Checklist (Goodman, 2001). The emotional symptoms and peer problems scales can be combined into an 'internalising subscale". Goodman, Lamping & Ploubidis (2010) advise that this broader scale can be appropriately applied in analyses involving 'low risk' samples yet for more "high risk" samples, or those with a clinical disorder, separate subscales may add more value. Therefore due to the current study sample, emotional symptoms and peer problems are analysed separately, as distinct yet component factors of internalising problems.

Mindfulness

Mindfulness was assessed using the Children and Adolescent Mindfulness Measure (CAMM; Greco, et al., 2011), a ten item self-report measure. Adolescents rate their responses on a 5-point scale which measures three facets of mindfulness: 1) *observing*-the extent to which adolescents notice or attend to internal processes (thoughts, feelings, bodily sensations), 2) *acting with awareness*- measures present moment awareness 3) *accepting without judgement*- measures non-judgemental

awareness and openness to experiencing a full range of internal phenomena. It has shown to be a developmentally appropriate measure of mindfulness for children and adolescents demonstrating adequate levels of reliability (α=.80) as well as incremental and construct validity with a good sample size (n=334) (Greco et al., 2011).

Well-being

The Warwick- Edinburgh Mental Well-being Scale (WEMWS, Tennant et al., 2007) measures affective-emotional, cognitive-evaluative and psychological aspects of well-being and asks respondents to score how often a set of 14 positive statements of mental well-being applies to them. A recent sample of 1,650 students from the UK and Scotland aged 13-16, found it short, comprehensible and easy to complete thus supporting it's use with this age group (Clarke et al., 2011). Reliability (internal consistency and test-retest), validity (construct and face) and sensitivity to change have all been demonstrated (Stewart-Brown & Janmohamed, 2008). In addition, it has been proposed as an appropriate measure of well-being for young people in Northern Ireland (Leavey et al., 2009).

Psychological inflexibility

The Avoidance and Fusion Questionnaire for Youth (AFQ-Y) (Greco, Baer & Lambert, 2008) assesses the extent of psychological inflexibility engendered by high levels of cognitive fusion, experiential avoidance, and behavioural ineffectiveness in the presence of negatively evaluated private events (e.g., thoughts, feelings, physical-bodily sensations). The AFQ-Y has demonstrated adequate reliability (α=.90), convergent validity, i.e., positive correlations with child anxiety and negative

correlation with quality of life, and construct validity i.e., negative relation with mindfulness scores based on a sample of 329 children and adolescents (Greco et al., 2008).

2.3.6 Phase two - Qualitative Data Collection and Analysis

All students took part in semi-structured interviews as soon as possible after the programme concluded. 6 students participated in 5-month follow up interviews; the remaining 2 students were unable to participate due to timetable constraints. The interview format was semi-structured thus questions were partly pre-determined and partly prompted by the narrative. This allowed for participant's accounts of their personal experience to unfold, in real-time, and prompts were used to follow up on open-ended replies, (e.g., "You said that's helping you to think clearly, can you tell me more about that?). The structured questions were more aligned with the research agenda and were designed to connect and enhance the quantitative data, (e.g., noticing changes in relation to thoughts and feelings). Emergent ideas from earlier interviews (e.g., 'thinking clearly') were explored in greater depth in subsequent 5-month follow up interviews. The interviews followed a temporal structure, asking about personal experience, perceptions, change processes, lasting effects and potential future uses of mindfulness in daily life. Interview schedules are presented in Appendix 13.

Data obtained from these interviews was analysed using Thematic Analysis (TA) (Braun & Clarke, 2006). TA is a foundational method of qualitative analysis and involves 'identifying, analysing, and reporting patterns (themes) within data' (Braun & Clarke, 2006, p.6). In order to maintain a systematic and rigorous approach to this phase of data analysis Braun and Clarke's (2006) detailed 6 Phases of Thematic

Analysis were utilised to guide and inform the process. Firstly, the 'familiarisation' phase was engaged with by transcribing and then re-reading the interviews to become fully 'immersed' in the data. The subsequent phases of analysis involved developing codes and grouping the data into meaningful categories. Significant categories of codes were then drawn together and became candidates for stable and salient themes. An initial thematic map of the dataset was then produced. Following this the themes were refined, named and evaluated in the context of the wider research aims. Finally, extracts that illustrated each theme were selected. As highlighted by Braun and Clarke (2006, p.6) 'analysis is not a linear process,' as perhaps it is presented in the above summary. Operations such as re-reading and re-coding the data, integrating themes and re-labelling themes, were employed to eventually result in a set of findings.

Inductive analysis, which is data driven, was used to attain a full picture of the interview data rather than 'trying to fit it into a pre-existing coding frame' (Braun & Clarke, 2006, p.12). As this thesis takes a critical realist approach it was acknowledged that the subjective interpretations of the researcher may impact the analysis process, particularly the theoretical underpinning of the research. Steps were thus taken to ensure the analysis was data driven following a "bottom-up" process. For instance, themes were reviewed by an independent qualitative researcher at Queen's University Belfast and re-worked to ensure they captured the data accurately. Themes can be described at a *semantic*- surface meanings of the data, or *latent*- an interpretation which goes beyond the data and considers the broader assumptions and meanings underpinning what is actually said in the data (Braun & Clarke, 2006).

The results and discussion reflect this latent approach, as the data is set within a theoretical and psychological context in order to explain the experiences and change processes described in the interviews. The process of TA is presented in Appendices 13-19.

2.4 Results

2.4.1 Phase One – Quantitative Results

The first phase of the study investigated the effects of participation in a mindfulness intervention, ".b", on a series of student report measures as well as teacher and parent reports of emotional symptoms and peer problems. A brief outline of preliminary analyses is presented, followed by descriptive statistics for each of the outcome measures. Results are then organized according to each hypothesis with significant and non-significant results reported. Further information on inferential statistics is presented in Appendix 20.

2.4.2 Preliminary Analyses

Statistical analysis was conducted using S.P.S.S. 22, a computer software package. Values of skewness and kurtosis confirmed the normality of data, except peer problems (student-rated) and emotional symptoms (teacher-rated). Kolmogorov-Smirnov statistics indicated that these variables were significantly skewed from the normal distribution (Appendix 21).

Therefore non-parametric tests were used for these analyses. A series of repeated measures ANOVAs (within-subjects) were used to analyse the remaining variables that fulfilled parametric assumptions, i.e. data were normally distributed.

As these data variables had more than two levels (i.e., time of measurement pre, post and follow up) checks of sphericity were required in the use of an ANOVA. These tests revealed that the data did not violate the assumption of sphericity, as the significance value for all variables was $p < 0.05$ (See Appendix 22).

Parent rated measures could only be obtained at two time points (i.e. pre and post) thus paired t-tests were used to analyse this data, i.e. parent rated emotional symptoms and peer problem scores. Cohen's *d* was used in the calculation of effect sizes, where 0.3 and 0.5 are medium and large effect sizes respectively. Finally, reliabilities were calculated using Cronbach's α which indicated good to high internal consistencies for all scales used (α=.78 to .89).

2.4.3 Descriptive Statistics

Table 2.6 provides information on the means, standard deviations and range.

Table 2.6

Descriptive Statistics

Measure	*n*	Pre .b intervention					Post .b intervention					Follow-up .b intervention				
		M	*SD*	Median	Range	IQR	*M*	*SD*	Median	Range	IQR	*M*	*SD*	Median	Range	IQR
Student measures																
Emotional symptoms	8	6.25	1.67	6.50	5.00	2.50	4.63	2.13	4.00	6.00	3.75	4.50	2.00	4.50	6.00	3.25
Peer problems	8	3.75	1.91	3.50	6.00	1.75	4.57	2.87	4.00	6.00	3.75	3.71	1.49	4.00	6.00	4.75
CAMM	8	20.13	7.26	23.00	19.00	14.00	21.25	6.82	22.00	22.00	10.00	23.88	9.87	27.00	24.00	20.25
AFQ	8	30.88	12.98	28.00	39.00	21.00	29.38	9.63	27.00	27.00	17.50	29.75	11.10	31.00	33.00	19.25
WEMWBS	8	34.88	8.32	38.00	26.00	10.25	39.25	13.01	44.00	36.00	23.50	40.36	14.67	46.00	37.00	28.50
Teacher measures																
Emotional symptoms	8	5.57	2.25	4.50	7.00	2.50	4.57	2.87	3.50	7.00	5.00	3.90	2.41	4.00	4.00	2.50
Peer problems	8	4.29	1.38	4.50	4.00	2.00	2.14	1.95	1.50	5.00	3.50	3.00	1.73	2.50	4.00	3.50
Parent measures																
Emotional symptoms	7	7.57	2.37	6.50	5.00	4.75	5.58	2.64	5.00	8.00	4.00					
Peer problems	7	3.86	2.04	4.50	6.00	4.25	3.71	1.70	4.00	5.00	2.00					

2.4.4 Inferential Statistics

Primary Hypotheses

Hypothesis 1: Students will experience a statistically significant decrease in internalising problems – emotional symptoms and peer problems

Repeated measures ANOVA indicated a statistically significant main effect of time on student ratings of emotional symptoms, F (2, 14) = 5.9, p = .014. Emotional distress was greatest at pre-testing (M=6.25, SD=1.67) and reduced at post testing (M=4.63, SD= 2.13) and this was maintained at follow-up (M=4.5, SD=2.0). A large effect size[40] was shown, *partial* η^2= .46. Post hoc Bonferroni tests found no significant difference between emotional distress scores on comparisons of time between pairs of groups (i.e. pre vs post, post vs follow-up and pre vs follow up). This may be explained by a reduced sample size[41] and correspondingly limited statistical power to detect differences between groups.

A Friedman test was performed due to a non-normal distribution of students' peer problems scores. The Friedman test did not indicate a statistically significant main effect of time on peer problems score $\chi 2$ (2, n = 8) = 3.08, p = .857. Mean peer problem scores remained relatively consistent from pre testing (M=3.75, SD=1.91) to post testing (M=4.1, SD=2.23) and at follow up testing (M=3.9, SD=2.41).

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[40] Effect sizes were calculated using partial eta squared where medium and large effect sizes are represented by values 0.09 and 0.25 respectively (Hanna & Dempster, 2012)

[41] Hanna and Dempster (2012) highlight the issue of finding a statistically significant result in ANOVA but the post hoc test suggesting no significant difference between groups. This may be caused by a smaller sample size in comparison groups, (i.e. two groups) compared to the sample size in ANOVA, which has more than two groups. A smaller sample size reduces the statistical power and may increase the likelihood of making a Type II error (i.e. the null hypothesis is not true but the sample limits the ability to detect this).

Hypothesis 2: Students will experience a statistically significant increase in mindfulness skills

With reference to mindfulness scores, results revealed a statistically significant difference between student ratings of mindfulness over time F (2, 14) = 4.14, p= .039 showing a large effect size *partial* η^2 = .37. Post hoc Bonferroni tests indicated that students' increase in mindfulness ratings from pre intervention (M=20.13, SD= 2.56) to follow up testing (M=23.88, SD=3.5) was statistically significant (p= .025).

Hypothesis 3: Students will experience statistically significant decrease in psychological inflexibility

Considering psychological inflexibility outcomes (AFQ-Y), results showed that students' AFQ-Y scores did not significantly differ over time F (2, 14) = . 395, p = .681, *partial* η^2 = .05, therefore the effect of the intervention on psychological flexibility is not statistically supported.

Hypothesis 4: Students will experience statistically significant increase in well-being

With reference to student well-being, results revealed no significant main effect for time on students' rating of WEMWBS over time, F (2, 14)= .1.55, p = .247. Descriptive statistics indicate that students experienced an increase in mean well-being from pre (M=34.89, SD=8.32) to post (M=39.25, SD=13.01) with slight increases noted at follow up (M=40.66, SD=14.67) which is detected by a medium effect size *partial* η^2 = 0.18.

Secondary Hypothesis

Hypothesis 1: Teacher ratings of students' internalising problems (emotional distress and peer problems) will improve following students' participation in the intervention.

Teacher ratings of peer problems showed a statistically significant main effect of time F (2, 14) = 7.89, p =.006, with a large effect size *partial* η^2 = .57. Post hoc Bonferroni tests also indicated that the teachers ratings of peer problems pre intervention (M=4.29, SD=.522) significantly decreased (p=.044) achieving lower scores at post testing (M=2.14, SD=.74). Descriptive statistics show slight increases in peer problems as rated by teachers at follow up (M=3.0, SD=1.73).

A Friedman test was used to assess the difference in teachers rated scores of emotional symptoms as the data was not normally distributed and positively skewed. Results did not indicate a statistically significant main effect of time on emotional symptoms score $\chi 2$ (2) = 3.59, p =.166. Descriptive statistics show emotional symptoms to be highest at pre testing (M=5.25, SD=2.25). This decreased post testing (M=4.25, SD=2.82) and again at follow up testing (M=3.75, SD=1.38).

Hypothesis 2: Parent ratings of students' internalising problems (emotional symptoms and peer problems) will improve following students' participation in the intervention.

Seven parents provided data for this study (N=7) at two time points (pre and post intervention). A paired sample t-test was conducted to evaluate the impact of the intervention on parents rated scores of emotional symptoms and peer relationships. Results show a statistically significant improvement in mean emotional symptoms scores between pre intervention and post intervention, t (6) = 3.24, p= .018, with a

large effect size[42] (d=0.84). Parent's rating of emotional distress was greatest pre intervention (M=7.57, SD=2.37) and decreased post intervention (M= 5.58, SD= 2.64).

With reference to parent's rating of peer problems there was no statistically significant difference found between pre intervention and post intervention, (t (6)= .420, p= .689, (d=0.06). Descriptive statistics show that parents rating of peer problems at pre intervention (M=3.86, SD=2.04) slightly decreased at post intervention (M= 3.71, SD= 1.70).

2.4.5 Clinical Change

Clinically significant change is a method by which to evaluate whether an intervention has brought about meaningful change for the individual. Clinical change is thought to generally focus on symptom reduction, i.e. does the individual's scores move from the clinical or "dysfunctional" range into the normal or "functional" range for the general population (Jacobson & Truax, 1991). However it has also been suggested that other areas of change can be considered such as quality of life and ability to cope (Farrell, Schlup & Boschen, 2010). Clinical change can be determined in a variety of ways yet the method proposed by Jacobson & Truax (1991) appears to be the best developed and most widely used (Seggar, Lambert & Hansen, 2002). Jacobson & Truax (1991) proposes three different ways clinical change can be calculated:

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[42] Calculation of effect sizes is obtained by finding the difference between the mean score for each set of scores and dividing by the standard deviation. The standard deviation obtained in the first measurement point is used. The guideline follows the principle that this standard deviation is more appropriate because it represents the scores as they were originally, more similar to the population before they had undergone an intervention (Hanna & Dempster, 2012, p.179).

Criterion A: Has the person moved more than two standard deviations from the pre-treatment mean score of the clinical population?

Criterion B: Has the person moved to within two standard deviations of the mean for the "normal" sample?

Criterion C: Has the person moved to the "normal" side of the midpoint between Criterion A and B?

Criterion C presents a problem when the standard deviations of the normative data and the "problem" population are not equal. In response to this Evans (2010) has developed a computer programme to calculate Criterion C following the recommendations set forth by Jacobson & Truax (1991). In order to carry out this calculation the SDQ subscales' mean and standard deviation in both normative sample and the population being studied is needed. The current results determine if participants moved from within clinical to normal range, as determined by SDQ cut off points, and whether this change is clinically significant. Examining clinical significance of the SDQ[43] emotional symptoms and peer problems allows for comparison of scores between all three informants (self-completed, parent, teacher) from pre intervention to post intervention.

[43] Cut off scores for SDQ subscales are presented in Appendix 23

SDQ Emotional symptoms score

Students' self-ratings

In terms of clinically significant change, using the current study's sample the mean emotional symptoms score pre intervention was 6.25 (SD=1.66), which is considered a cause for concern, falling in the 'High' or close to 'Abnormal' range. Using normative data on the SDQ reported by the Meltzer, Gatward, Goodman, and Ford (2000) the mean score was 2.8 (SD=2.1) and it was calculated that post intervention score of 4.73 or lower would be needed to achieve clinically significant change. Results indicate that at post testing 62% (n=5) reported clinically significant change which increased to (n=6) 75% at follow up.

Parent ratings

Parent average ratings of emotional symptoms before participation in the programme was 7.57 (SD= 2.37) which is classified as 'Very High' or falling within the "Abnormal" range. Based on the criterion for clinical change, i.e. Meltzer et al.,'s (2000) mean of 1.9 (SD=2.0), it was calculated that a post intervention score of 4.5 would indicate movement into the normative range. Results at post testing demonstrate 71% (n=5) reported clinically significant change.

Teacher ratings

Cut off scores of 6 and higher for the teacher rated emotional symptoms scale are considered to fall within the 'High' or 'Abnormal' range. The mean emotional scores in this current study's sample was slightly below this cut-off 5.57 (SD=2.25) and using Meltzer et al.,'s (2000) mean normative score of 1.3 (SD=1.9) it was calculated that a post intervention score of 3.26 or lower would signify movement

into a normative range. Results show that post testing 50% (n=4) reported clinically significant change which decreased to 37% (n=3) at follow up testing.

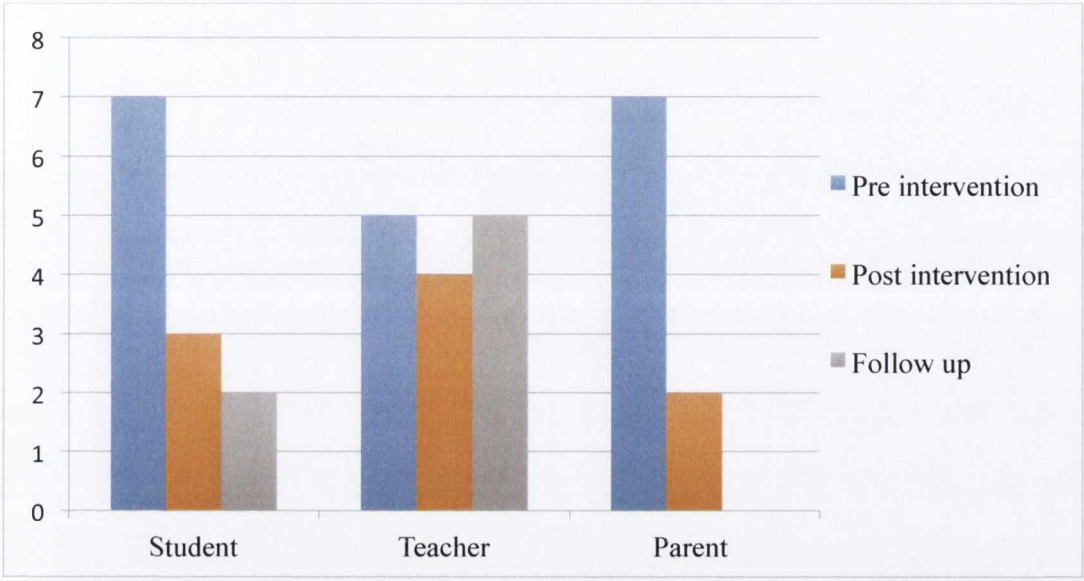

Figure 2.4 Number of students, self-rated, parent-rated and teacher rated, with emotional symptoms scores within clinical cut off ranges at pre, post and follow up.

Peer problems

With reference to the peer problems scale results for teacher and parent ratings are presented as self-completed student scores showed minimal change across the course of the study.

Parent ratings

Raw scores of 4 or higher as rated by parents on the peer problems scale are regarded as a cause for concern. Considering clinically significant change the mean peer problems score from this study was 3.86 (SD= 2.04), which is regarded as "High" or approaching the "Abnormal" range. Using normative data from Meltzer et al., (2000) the mean score was 1.5 (SD=1.7) and it was calculated that a post

intervention score of 2.57 or lower would be needed to achieve clinically significant change. Results indicate that post testing 57% (n=4) evidenced clinically significant change.

Teacher ratings

Again with reference to clinical significance in the current study the mean peer problems score as rated by teachers was 4.29 (SD= 1.38) which falls between the "Slightly raised" and "High" category. Using normative data the mean score was 1.4 (SD=1.8) and it was calculated that a post intervention score of 3.03 or lower would indicate movement to the normative range. Results show that at post testing 75% (n=6) evidenced clinically significant change.

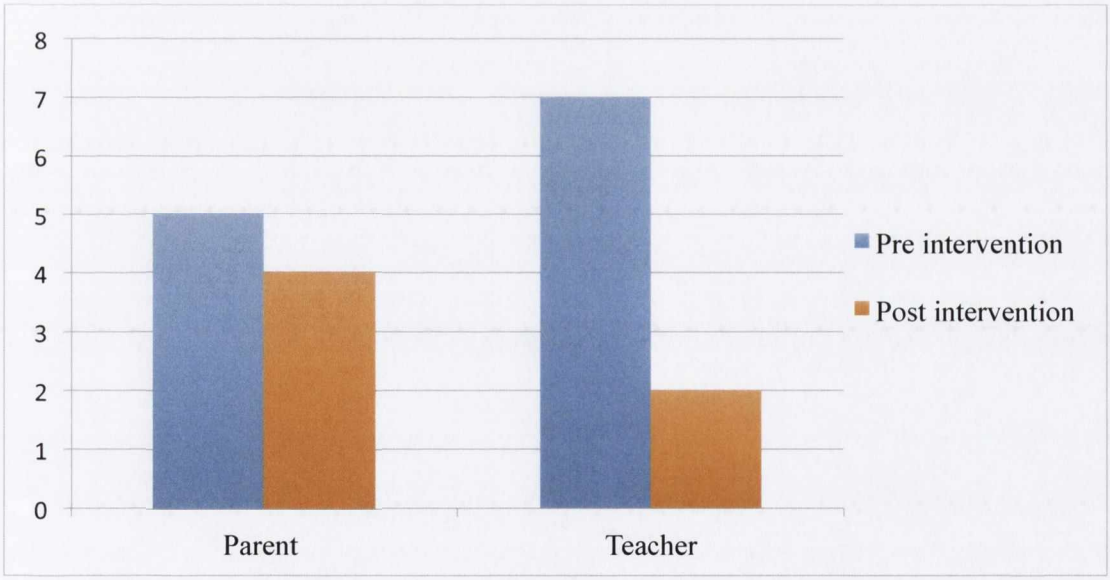

Figure 2.5 Number of students, reported by teacher and parent ratings, to have peer problems scores within clinical cut-off ranges from pre to post intervention.

WEMBMS

The WEMBMS is a non-standardised measure and does not have clinical cut off points. Higher scores in the WEMWBS indicate a higher level of mental well-being, within the range of 14-70. Clarke et al., (2011) report the validation and psychometric properties of the WEMBMS in a population of 1,650 UK and Scottish students, aged 13-16. Results indicated that the mean WEMWBS was 48.8 and the median was 49. When considering the results from this study it is encouraging to note an increase in mean scores from pre (34.8) to post (39.25) and follow up (40.9) and corresponding increases in median scores from pre (38) post (44) and follow up (46). While the scores in this study are lower than those identified by Clarke et al., (2011) they are indicative of increasing mental well-being after participation in the intervention and show a movement towards the average range of a normative population.

CAMM

Similarly the CAMM is not standardised and therefore lacks norms for comparison. The range of scores is 0 to 40; the higher the score the more mindful one reports to be. Greco, Baer and Smith (2011) report the development and initial validation of the CAMM showing mean scores in a population sample of 319 13-16 year olds to be 24.52 (SD=7.50). In the case of this study average pre scores (20.16), post scores (21.25) and follow up (23.88) signify a movement towards the average score reported by Greco et al., (2011). Students' reporting of higher levels of mindfulness skills, measured by the CAMM, post intervention and follow up is considered an encouraging result.

2.4.6 Phase two- Qualitative Results

Phase two represents an analysis of qualitative data obtained from participant interviews at post-intervention and five month follow-up. The findings are organised into three overarching themes, which progress through the following sequence- 1) initial perceptions of the .b programme, 2) participants' experience of practicing mindfulness and 3) the cultivation of insight and application of mindfulness in day-to-day life. The process of change is further illustrated through eight identified sub-themes, helping to explain the ways in which participants' engagement with mindfulness developed over time and how perceived positive outcomes post-intervention, could be attributed to training in mindfulness. Potential mechanisms of change, that support positive outcomes, are also identified and include *relaxation,* development of *present moment awareness* and *perceived self- control,* facilitating changes in participants' thinking, coping responses and their flexible use of mindfulness concepts and skills in everyday life. Themes, sub-themes and potential mechanisms of change are illustrated in the thematic map below (Figure 2.6) and will now be described in detail.

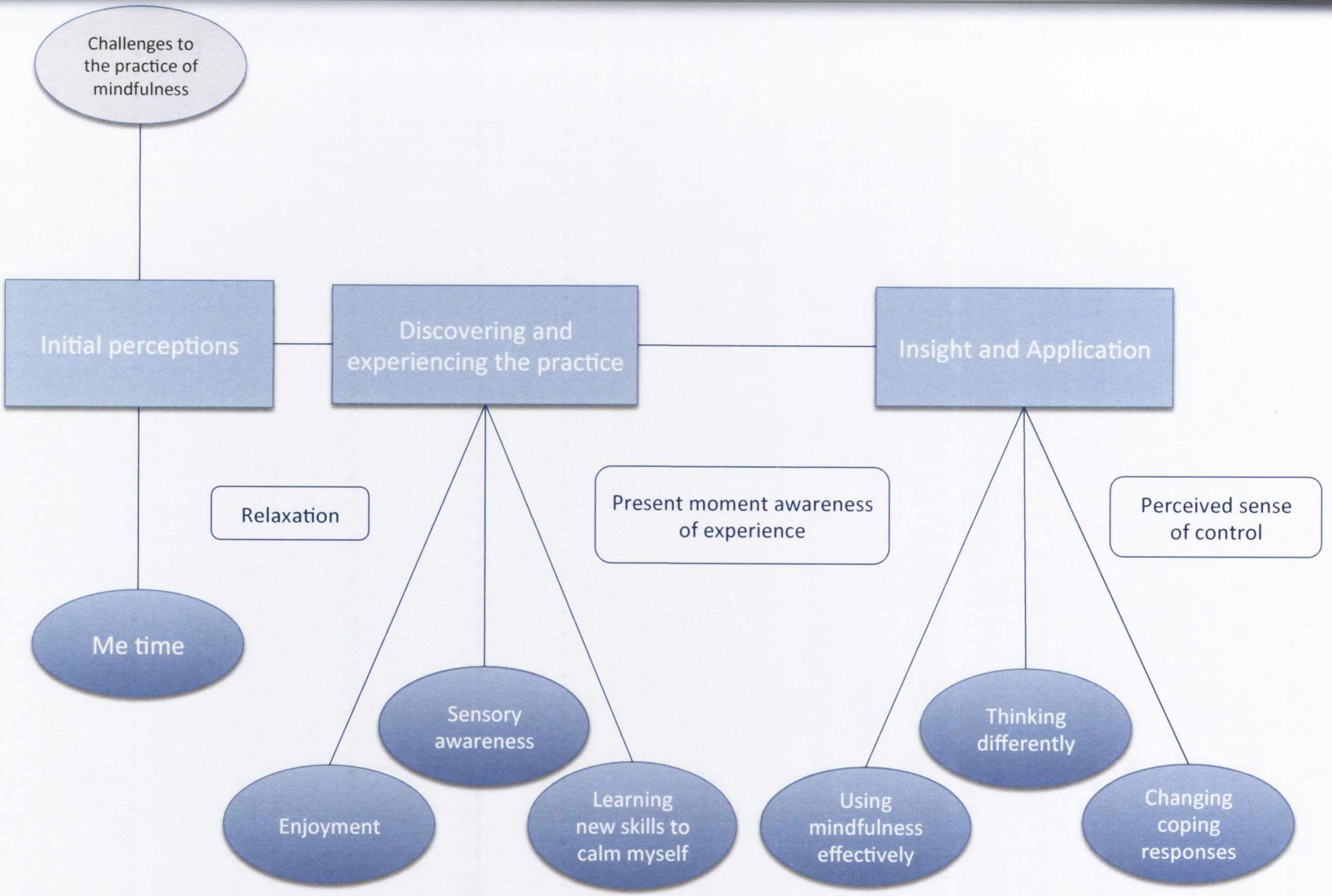

Figure 2.6 A thematic map representing participants' engagement with mindfulness over time and their experience of positive outcomes, as a result of this engagement, facilitated by potential mechanisms of change

Initial perceptions

The first theme relates to participants' initial perceptions of the course. Within this theme two sub-themes were developed including 'challenges to practicing mindfulness' and 'me time', which are described below.

Challenges to practicing mindfulness

Overall participants described a positive experience of their introduction to mindfulness, however some found attending to their own internal experiences initially difficult.

For **Rebecca**[44] this internal focus brought about a heightened awareness of how challenging the mind can be to cope with

"I found it quite hard to concentrate for some of the breathing. At the start my mind was quite distracted. I dunno, there's just lots going on in my head".

The attitude one brings to mindfulness practice was also important and for **Christine** more negative preconceptions and expectations appeared to have influenced the degree to which the programme was perceived as helpful

"I just wasn't into the whole breathing thing because I had done it before and it just didn't work for me it never has."

"Me time"

Mindfulness sessions were well received by students and provided an opportunity to relax, let go of the daily pressures of the school day and reclaim time for themselves. **Jane** summed up this experience succinctly

"It was good, it was some like 'me time'".

[44] All names have been changed to protect the anonymity of the research participants

Participants recognised the value of taking time out to simply sit still and **Rebecca** noted the benefits of stepping out of 'doing' mode and into 'being' mode *"I thought it was quite helpful and just like stopping and taking time for yourself really".*

Ben agreed and reported discovering and reaping the benefits of a relaxing environment *"the silence was nice during a hectic school day and the tranquillity".*

Discovering and experiencing the practice

Many of the comments made by participants related to their experience of the programme and learning the practice of mindfulness. These experiences appeared be related to three main subthemes including 'learning new skills to calm myself' 'sensory awareness' and 'enjoyment'.

Learning new skills to calm myself

As well as the "me time" effect, participants described a new experience of learning to self-calm which was frequently reported to feel *"relaxing"*, as **Fiona** explained *"Just em learning to relax it was something new".*

Students described mastering different techniques, such as focusing on breathing, which enabled them to reach calmness and relax, as **Andrew** reports *"the breathing was relaxing to practice and I found it easy to do."*

While participants varied in their degree of success with breathing techniques **Stephen** explained how learning specific strategies helped him to access a calming breath when he needed it

"Maybe just the simplicity of the techniques like 7/11, just breathe in count to 7, breathe out count to 11, it's not hard to forget"

Sensory awareness

Awareness of sensory experience was also cultivated during sessions and for **Emily** mindfully attending to physical sensations was a memorable practice

"The one where you just sit down and just like concentrate putting everything into your hands and feet things like that I liked that".

Participants also practiced focusing their attention on external experiences, such as mindful eating

"Eating the grapes and the strawberries really slowly and we were really thinking about it while we were eating it" **(Fiona).**

Through these practices participants discovered how to expand their sensory awareness and experienced the benefits of directing attention to present moment sensations

"Just like feeling sensations in different part of your body was something that was quite good" **(Ben)**

Enjoyment

Participants' sense of enjoyment was a prominent theme and this was supported by specific activities in sessions

*"The shock ball challenge that was really fun"***(Christine).**

Rebecca described a pleasing discovery, as her perceptions of the course changed over time

"It's very different from anything else but when you get into it, it's quite good".

Sharing the experience with the group enhanced **Jane's** enjoyment of the course, appreciating the sense of connectedness her peers provided

"I liked it. I don't think it would have been as good if you had been by yourself doing it like one-on-one cus then you would have felt lonely or it would have been a bit more boring".

Similarly **Ben** enjoyed a sense of shared experience facilitated by the group, which also served to normalise his feelings and responses

"You did it with everyone and it wasn't just you. You sort of got to see everyone else's reaction that was good".

Insight and application

Participants made a number of comments regarding the possible benefits of applying mindfulness skills in their day-to-day lives and a developing insight as a result of applying these techniques. Three sub themes were identified in relation to this theme including "using mindfulness effectively", "thinking differently" and "changing coping responses".

Using mindfulness effectively

While participants initially reported benefits specific to their participation in sessions, follow up interviews revealed a greater depth of engagement and motivation to practice mindfulness skills outside of the classroom context. For example **Emily** recognising the benefits for herself by applying a mindfulness technique at home

"I found the CD actually for me really helped me sleep, the 'beditation'"

Participants also demonstrated the ability to generalise mindfulness skills for use in a range of personal situations and for **Jane** it's application helped her to manage the experience of anxiety

"I did a .b once in the car, just made me a wee bit calmer on my way to school"

Rebecca similarly used a mindfulness technique to overcome a challenging social situation, allowing her to manage more effectively

"If I was going out, like somewhere really busy and I was freaking out a wee bit I would use it to calm me down".

Stephen on the other hand reported integrating mindfulness into his practice of sport, serving to enhance his sense of control within this activity

"I'm just able to think about when I hit the ball, how hard I should be hitting it, things like that".

At follow up interviews **Stephen** described how mindfulness continued to enhance his practice of sport, supporting his experience of positive emotions

"Yea when you connect with the ball and it goes right that's a very satisfying feeling"

Thinking differently

Participant's increased awareness and attainment of calm allowed them to experience a different way of relating to their thoughts and emotions. For **Christine** this offered insight into anxiety and it's illusory qualities

"It helped you realise anxiety, it exaggerates, like how bad something is going to be".

Stephen described the clarity that came with present moment awareness of thoughts, enabling him to recognise unhelpful thinking habits and take more control of them

"Just focusing on what's going on right now instead of what might happen in the future and being more rational with my thoughts".

Ben's take away message from the course was more positive, recognising the benefit of increased control over thoughts as a way to shift his perspective when needed

"I guess from the course like changing your mindset and things. The same things can happen but you can change how you think about them".

Changing coping responses

An enhanced understanding of the applicability of mindfulness in day-to-day life facilitated students' competence in the use of techniques to meet future challenges. For example **Andrew** described the potential usefulness of mindfulness skills to reduce anxiety

"Maybe for going to an interview or something it could just help me be a bit less anxious or worrying".

Likewise for **Ben** anchoring in the present moment was perceived as a helpful way of responding to future anxious situations

"I think it might like help me to calm down before an exam or going somewhere that provokes nerves. If I can just stay in the actual moment then it makes things a bit easier".

Participant's experience of effective coping allowed them to adjust their way of thinking about challenges, recognising that psychological change is possible. For **Andrew** this strengthened his belief in his own ability to cope in the future

"It just helps as I said to improve your confidence in certain situations and when you might not have done something it helps you to have the courage to go and do it"

2.5 Discussion

Results of this study provide promising initial support for the use of .b with adolescents experiencing ABSR. This is supported by quantitative and qualitative findings, which are now combined and discussed in an integrated manner. Quantitative outcomes indicate significant effects on mindfulness, emotional distress (student and parent rated) and peer problems (teacher rated), showing large effect sizes. Increases in well-being are reported with effect size in the medium range. The intervention was also associated with clinical change in component aspects of internalising difficulties across a range of informants. There was no statistically significant effect on students' rating of psychological inflexibility. Qualitative data provides greater depth and clarity about participant's experiences of learning mindfulness skills and a basis from which the change processes, attributed to their participation on the course, can be more fully understood. Each of the findings are now discussed in turn.

Firstly, results demonstrate that mindfulness ratings increased significantly from pre intervention to follow up, evidenced by a large effect size (*ES*=.37). Sustained increases in mindfulness post intervention have been similarly found in studies involving adolescents experiencing mental health problems (Tan & Martin, 2015) and in non-clinical adolescent students (Hennelly, 2011). The increases in mindfulness skills post course suggest that this is a gradual process, and one that continues to develop as students apply mindful attitudes and techniques to everyday life. The generalisation of mindfulness skills is considered an important aspect of the process of change (Thompson & Gauntlett-Gilbert, 2008; Mason & Hargreaves) and qualitative findings help explain how this may have been achieved.

In this study, qualitative data revealed that increasing mindful awareness enabled participants to observe their thoughts and emotions in the present moment, with greater clarity and from a new perspective. Discovering how to relate to thoughts differently seemed to give participants an increased sense of control, allowing them to step back and decide how best to respond. This process has been termed by Shapiro et al., (2006) as "re-perceiving". Re-perceiving is thought to facilitate a sense of 'non-attachment' allowing us to 'dis-identify' from the contents of thoughts. It is suggested that by developing the capacity to dis-identify or stand back from thoughts and emotions we are no longer controlled by states such as fear and anxiety, and are thus better able to use a wider range of adaptive coping skills (Shapiro et al., 2006). In the case of this study potential mechanisms that may help to explain reductions in emotional distress through stepping back or 're-perceiving' included: relaxation, present movement awareness of experience (i.e., thoughts and feelings) and perceived self-control, hence enabling effective responding with mindful techniques. It should be noted that the change in teacher ratings of emotional distress was not statistically significant which may be, in part, due to the positively skewed data pre-intervention, i.e., scores in the close to average or slightly raised range.

This study found no significant change in peer problems scores, as rated by students. Nevertheless social related difficulties are an important factor to explore, considering their possible cause, consequence or correlate of anxiety based school refusal, anxiety or depression (Maynard et al., 2015). It is argued that studies investigating the mechanisms of mindfulness tend to focus on the individual level (e.g., dis-identifying with thoughts) thus much less is known about the interpersonal processes which influence psychological change (Bihari & Mullan, 2014).

However qualitative findings did demonstrate participant's perceived value of the group such as **Jane** and **Ben**, who appreciated the experiences of group sharing and feeling less alone. Groups have been found to add to the effectiveness of mindfulness teaching due to group support and the development of group camaraderie (Wisner, 2008, Semple et al., 2006). Qualitative studies exploring the effect of group processes suggest that participant's increased tendency to 'live in the present moment' can increase their ability to enjoy and appreciate others (Bihari & Mullan, 2014). It is therefore possible that the significant reduction in peer problems observed by teachers was influenced by participants' increased present moment awareness, which in turn facilitated the "group camaraderie" effect, and these positive relations may have generalised to the normal classroom environment. Parents however did not report a change in peer problems post intervention. This may be due, in part, to parent's lack of opportunity to observe their adolescents in social interactions, due to potentially limited social interaction associated with school refusal (Gregory & Purcell, 2014).

This study found adolescents' mean well-being scores increased from pre to post intervention and again at follow up, evidenced by a medium effect size (*ES*= 0.18) yet this change did not reach statistical significance. Qualitative findings emphasis the possible experience of greater well-being in sessions including relaxation, feelings of calm and enjoyment. **Stephen's** account of a moment-to-moment flow of experience while playing soccer, illustrates how mindfulness can help us to fully engage in our interests and experience positive emotions. Even momentary experiences of good feelings are thought to broaden our sensory awareness and habitual modes of thinking and acting, in line with the 'broaden-and-build' theory of positive emotions (Fredrickson, 2001). This theory explains how

cultivating experiences of positive emotions at opportune moments, for example while playing sport, can enhance emotional well-being over time. While previous .b studies report significant increases in well-being post intervention (Kuyken et al., 2014; Hennelly, 2012) these studies involved 'healthy' students, rather than adolescents known to be experiencing mental health difficulties. It therefore possible that the influence of positive emotions on well-being, following the mindfulness intervention, may be more modest and gradual for the participants in this study given their previous and enduring experience of mental health difficulties. It is suggested that the effects of mindfulness interventions on well-being are 'more mixed', with studies reporting greater effects on the reduction of negative outcomes compared to improvements on positive outcomes (Waters, Barsky, Ridd &Allen. 2014; Zoogman et al., 2014).

The development of mindfulness skills has been suggested to influence the ability to shift and redirect the focus of attention to the present moment rather than being 'fused' with thinking about the past or future experiences. Reductions in psychological inflexibility have thus been found to be associated with mindfulness practice (Tan & Martin, 2015) as it teaches acceptance and openness to the present moment, be it good or bad. Although students' acquired mindfulness skills to deliberately calm and cope with certain situations, they may have also persisted with more habitual types of avoidance; to deal with more distressing private experiences (e.g., dysfunctional thoughts associated with school attendance) and thus maintained their attempts to avoid them due to the immediate, short-term relief these actions produce. Greco et al., (2008) suggest that this process of 'experiential avoidance' is learned early in life and once habituated, may be highly resistant to change. It is

therefore possible that the relatively light touch of the 9 week intervention may not have been sufficient to effect change on participant's levels of psychological inflexibility. However participants did report changes in their relationship to thoughts and emotions and while this shift in perspective may be modest it is possible that more intensive, prolonged mindfulness practice could bring about greater change in this area.

Qualitative data revealed the benefits of having a space to relax, experience calm and enjoy "me time". This is an important finding given the research to suggest that developing feelings of safety and security at school are key factors in effective interventions for school refusal (Nuttal & Woods, 2013). Furthermore, previous studies exploring the implementation of mindfulness programmes in alternative school settings suggest that establishing a "chill" environment in a secure space is crucial to successful implementation (Bluth et al., 2015). The role of the programme instructor or facilitator is also an important consideration in implementation (Durlak Weissberg, Dymnicki, Taylor & Schellinger, 2011). Thus as an outsider' delivering the programme, special efforts were made to develop trusting relationships with students. At the suggestion of the VP, time was spent with students during their lunch break, before programme commencement, and occasionally in class following .b sessions, e.g., helping with art class. The purpose of this was to establish trust and rapport with students and to be seen as more of an 'insider' in the eyes of students (as per Bluth et al., 2015). A member of the school support team, the Occupational Therapist, (OT), was also asked to attend the first two sessions as a "helper". As the OT had a relationship with students her initial presence may have, in part, facilitated the fostering of a safe environment, enabling students to relax and fully engage with

the programme. It is also worth mentioning that participants achieved good attendance rates with 75% (n=6) attending over eight of the nine .b sessions. Building trust and relationships was considered a necessary first step to achieving acceptability. This study thus supports the finding that mindfulness interventions are accepted and well tolerated by adolescents (Mendelson et al., 2010; Hennelly, 2011) including those with clinical diagnoses (Biegel et al., 2009).

Qualitative data also revealed some challenges facing pupils seeking to practice mindfulness in school. These included having negative preconceptions about meditation and difficulties attending to internal experiences, e.g., breathing and body scan practice. Shapiro et al., (2006) suggests that this 'internal focus' can potentially enhance anxiety, for example by attending to internal sensations associated with the experience of anxiety. In this case, Wells (1990) suggests that an external focus might be more beneficial for people with anxiety disorders. The .b curriculum teaches students to attend to both their internal and external experiences, i.e., walking and mindful eating practices, which involve an external attentional focus. These practices may have been particularly important for the students in this study, given the high incidence of anxiety symptoms reported for this group (Egger et al., 2003) . While the programme does not invite immediate introspection or sharing of personal experiences, one participant withdrew after the first session, finding the internal focus, i.e. breathing practice, distressing due to past symptoms of trauma. It is thus important to note that while mindfulness can be effective approach to mental health, the utmost care needs to be taken when it is offered to more vulnerable groups. Having a protocol for managing distress, being well-informed about pastoral care and having an OT from CAMHS on site were considered necessary procedures to ensure

sensitive management and protection of the students' well-being .

In line with previous research exploring the feasibility of mindfulness in an alternative education setting (Bluth et al., 2015; Wisner 2014), this study also demonstrates the appropriateness and feasibility of the .b curriculum in an EOTAS setting. However implementation in this setting depended on the ability to be flexible and responsive to the school's schedule changes and unique students' needs while maintaining the integrity and core concepts of the programme. Overall, the accepting climate afforded by the EOTAS was found to support the implementation of the mindfulness programme. School staff showed their support by setting up classrooms, completing questionnaires and some teachers attended "taster" sessions to more fully understand mindfulness and experience the techniques. While the effect of staff's contribution was not measured, it may have helped students' engagement with the programme. These 'systemic factors' have been found to influence the impact of mindfulness based interventions in similar alternative school settings (Wisner, 2014).

While the results from the research are promising, several methodological issues should be taken into consideration. Firstly the sample size was small, which may preclude generalisation of the findings and restricts the statistical power of analyses. The study is also limited by absence of a control group, a point that will be discussed further in the critical appraisal section. The rigor of a controlled efficacy design was not possible to implement given the lack of an accessible and suitable comparison group and the view that withholding the intervention from interested and suitable students attending the EOTAS would not be appropriate. The lack of control group means that the positive results cannot be attributable directly to the mindfulness

intervention and it may be possible that the data reflects, in part, students' natural recovery. Finally the triangulation of data at five month follow up was limited by low response rate from parents filling out the survey. Despite these limitations, the preliminary results demonstrate the potential efficacy of a 9-week mindfulness based intervention for adolescents experiencing ABSR. To best of the author's knowledge no other published studies have reported outcomes associated with a mindfulness intervention with a similar population. A significant strength of the study was the inclusion of parent and teacher reports, which allowed the triangulation of information from third-party reports. This helped, at least in part, to address the lack of a control group in this current study. Finally, the collection of follow-up data, both qualitative and quantitative, provides support for the sustained benefits of mindfulness and continued use of skills after completing the intervention.

2.5.1 Future Directions

Future research should aim to address the aforementioned research limitations primarily in an attempt to provide evidence for mindfulness as an appropriate intervention for adolescents with ABSR. Continuing this avenue of research with more rigorous methods, using wait-list controlled trials or ideally randomised controlled trials, may be worthwhile. To better understand the possible effects and benefits of mindfulness as an intervention for ABSR future research could use more sensitive and specific measures of emotional symptoms i.e., anxiety and depression, as well as measuring more 'positive' mental health indicators such as resilience and self-compassion. The use of objective informants would also add to the validity of future findings. It would also be interesting to examine the effects of .b on younger adolescents and those who are identified as "at-risk" of school refusal.

2.5.2 Practical Implications

Managing a students' serious school non-attendance, due to emotional distress, presents a significant challenge to education and mental health professionals (Heyne & King, 2003). The .b programme's primary aim is to "teach young people to work with mental states, everyday life and stressors to cultivate well-being and promote mental health", (Kuyken et al., 2014, p.4). The findings of this study suggests that teaching mindfulness skills could offer a novel way of managing emotional distress (e.g., negative emotional responses and dysfunctional thinking) as well as promoting well-being. Focusing on an adolescent's capabilities and building positive experiences is thus viewed as an important shift, moving away from the strong emphasis on problems and 'pathology' often associated with this group (Pellegrini, 2007). Creating a space for "me time" was also perceived as valuable as it gave students an opportunity to relax and cultivate positive experiences in a school setting. Embedding a brief mindfulness practice in the school timetable is thus suggested as a feasible way of grounding, calming and regulating students who frequently experience emotional distress in a school setting. Finally, it has been suggested that group-based psycho-social interventions may be effectively implemented by EPs to deal with school refusal (Caroll, 2015). The delivery of a mindfulness programme requires experience and understanding of mindfulness but also include many generic EP skills (Iyadurai, Morris & Dunsmuir, 2014). This study suggests that enabling access to this type of targeted intervention for schools would be a worthwhile addition to the work of EPs who are interested in enhancing the mental health and well-being of distressed adolescents.

Additionally, *The Chief Inspector's Report 2012-14* has suggested that there is a need for schools to meet the increasing number of young people with mental health and anxiety-based conditions in EOTAS settings[45]. The school-based group format and short duration of the .b programme is thus proposed as a relevant, evidence-based intervention that could be responsive to this demand.

2.5.3 Summary and Conclusions

The findings of this current study indicate that participation in the .b programme is associated with sustained increase in ratings of mindfulness, parent and student reductions in emotional symptoms, teacher reductions in peer problems and increases in well-being, evidenced by large to moderate effect sizes. Qualitative results show that mindfulness sessions allowed students to reclaim time for themselves and relax, which enabled them to learn skills to calm themselves, enjoy learning as part of a group and experience present moment awareness of sensations, thoughts and emotions. Equipped with new ways of relating to their private experiences students' percieved sense of control facilitated the application of mindfulness to everyday activities, the management of challenging situations and confidence in their ability to make use of these techniques as a way of coping with stressful situations in the future. However these findings are tempered by the small sample size, lack of a control group and reported variability in the degree to which mindfulness was perceived as helpful and generalised for use in everyday life. Furthermore this study does not suggest that mindfulness should replace CBT,

[45] http://www.niassembly.gov.uk/globalassets/documents/raise/publications/2015/education/2615.pdf

relaxation techniques, sport or any other skilful strategies adolescents use to attain calm and/or manage anxiety related to school attendance.

These initial results suggest that the .b programme could be used as a complementary adjunctive option for supporting the psychological well-being of adolescents with ABSR and invites them to discover, for themselves, the potential value of living in the present moment.

Part Three

Critical Appraisal

A Mixed Methods Feasibility Study Examining the Impact of Introducing Mindfulness to Students Referred for Anxiety Based School Refusal

3.0 Critical Appraisal Paper

3.1 Introduction

The final part of this thesis involves a critical reflection of the process of conducting this research. It begins with an overview of the author's epistemological position, followed by a critical appraisal of the research design. The implications, limitations and future directions are then considered and the paper concludes with a personal reflection on the research journey and the lessons learned from undertaking a doctoral thesis.

3.2 Epistemological Position

Epistemology is a branch of philosophy that focuses on the theory of knowledge; especially in regard to its origin, nature, limits and validity (Wilig, 2001). Braun and Clarke (2006) state that researchers cannot "free themselves of their theoretical and epistemological commitments" (p. 12) and therefore the theoretical position adopted by a researcher should be made clear, as it is inextricably linked to the resulting research design, data analysis and interpretation of the findings.

The epistemological position adopted by the author was consciously taken into consideration during the conceptualisation and design of the current study. This position recognised that there is a subjective element in knowledge production; due to varying human experiences and interpretations. The author thus holds a critical realist epistemological approach, which accepts the view of reality as partly 'mind-independent' and rejects the possibility of verifying research findings in any absolute or 'objective' sense (Sayer, 2000). This philosophical perspective of reality thus differs from positivism and social constructivism, which are founded upon "a priori or necessary truths about the nature of the world" (Richards & McEvoy, 2006, p.69).

Critical realism is suggested to sit between these two positions and has thus been described as a 'stratified' ontology; derived from the domains of real objects and mechanisms and actual events and empirical experiences (Bhaskar, 2013). Pragmatism on the other hand interprets truth in terms of usefulness or what helps a research project (Easton, 2010). Therefore according to the pragmatist view there is no absolute truth, but rather truth is 'what works' and ontological discussions are deemed inconsequential unless specifically relevant to the research or context in question[46]. By contrast critical realists assume there is a 'real world out there' (Easton, 2010, p.119) but unlike social constructivists, pragmatists and even positivists, it is accepted that research cannot prove such assumptions or guarantee the production of a singular 'truth'; due to subjective perceptions and interpretations of the researcher and research participants.

For critical realists the aim of research and inquiry is thus "to develop deeper levels of explanation and understanding" (McEvoy & Richards, 2006, p.69). This goal is considered compatible with the exploratory nature of the current study which sought to 1) examine the effects of a mindfulness intervention and 2) explore how or what caused these effects, thus providing a broader and more complete understanding of the research question (Tashakkori, & Teddlie, 2010). An effective way of achieving an expanded understanding of the research problem is suggested to be through the use of both qualitative and quantitative techniques, or a mixed methods approach (Creswell, 2009). A critical realist rationale for using a combination of quantitative and qualitative methods will now be further described.

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[46] Retrieved from http://oregonstate.edu/instruct/ed416/PP2.html

3.2.1 Research methodology and methods. Critical realists argue that the choice of methods can be dictated by the nature of the research problems (McEvoy & Richards, 2006). With this, the researcher can select the methods that are most appropriate without being restricted by quantitative or qualitative categories. The 'either-or' approach can be broadened and "replaced by continua of options that stretch across both methodological and philosophical dimensions" (Tashakkori & Teddlie, 2010, p.274). Similar to pragmatist approaches to mixed methods research, critical realism does not automatically privilege any theory or research method over any other, and is genuinely pluralistic (Bhaskar, 2013). Creswell (2009) argues that such an approach is particularly useful for conducting 'real world' educational research in which researchers aim to provide meaningful and rigorous data from a complex and unpredictable environment.

In the case of this study a two-phased mixed method approach was implemented including the use of multi-informant questionnaires (self-report and third person ratings) and semi-structured interviews. This was intended to provide reliable interpretations of the intervention effects (quantitative) and a deeper understanding of these effects through the gathering the personal experiences of participants (qualitative). McEvoy & Richards (2006) highlight a key strength of using qualitative methods, from a critical realist perspective, is that it allows themes to emerge that could not be anticipated or captured by the use of quantitative measures alone. In the case of this study **Stephen's** unexpected application of mindfulness to sport was revealed through interviews, a finding that would have been missed if the research relied solely on quantitative measures. This research represents a small-scale feasibility study.

The use of mixed methods was thus considered an important way of enhancing the reliability and validity of findings and reducing the potential biases associated with a single-group design. The next section examines the choice of methods in more detail and then considers the limitations of taking each approach.

3.3 Methodological Considerations

Nuttall and Woods (2013) advocate the use of explanatory research in building 'practice based' evidence base for effective intervention of school refusal. Understanding the contexts and mechanisms that facilitate effective interventions at an individual level are considered "useful forms of practice-based evidence for EPs" (p. 361). While this research has provided an increased understanding of how evidenced interventions translate into practice and answered the proposed research questions, the findings are preliminary due to methodological limitations. These limitations will now be discussed.

Firstly, the small sample size limits generalisability of the findings. Maynard et al., (2015) points out that the body of studies in the area of school refusal is relatively small and many of these studies employ a small sample size. In the case of this study purposeful sampling was employed as the specialist EOTAS provision for students experiencing ABSR provided an accessible and feasible setting from which the research question could be empirically investigated. This meant that a large sample size was not possible, limiting the generalisation of findings to other groups. More research is thus needed to support further application and inquiry within this setting.

Such practical limitations also impacted the research design. While the use of a waitlist control group, active comparison or randomised controlled trial would have been preferable to detect intervention effects; a number of factors prevented this. Firstly, denying students' access to the proposed intervention (or even a wait-list control group) was not deemed ethically or practically viable for this feasibility study, given students' existing emotional distress and the potential benefits that could be derived from learning mindfulness as part of their EOTAS provision. Secondly the lack of an appropriate control group with similar experience, i.e. attending an EOTAS due to ABSR, was not available. As such, the study design prevents the ability to draw more definitive conclusions about the efficacy of .b (e.g., as compared with time or other psycho social interventions). However, it is felt that the collection of third party reports and qualitative information helped, in part, to understand how positive effects could be attributed to learning mindfulness skills. It should also be noted at this point that students required a CAMHS referral to access the EOTAS provision. While students continued to attend CAMHS during the study to the best of the author's knowledge they were not in receipt of therapeutic support or psychosocial intervention from this service.

The decision to take a pluralist or mixed methods approach was deliberate and helped enhance the veracity of the findings, given the study limitations. This approach also enabled the broad and unplanned intervention effects to be captured, as statistical results were expanded and enriched by collecting qualitative data from the same empirical settings. The value of taking a mixed method approach was highlighted when examining the findings relating to "peer relationship problems". In this instance the use of triangulation, i.e., third party informants, permitted externally observable

effects of the intervention to be assessed. For example while students' self-reports did not indicate reduced 'peer problems', observable improvements in 'peer problems' were reported by teachers, suggesting that relationships between students may have in fact improved post intervention. In addition the use of qualitative methods, i.e., semi-structured interviews, also revealed converging findings as students described the relational benefits of learning mindfulness in a group such as sharing experiences and enhancing enjoyment. The use of mixed method approach thus provides triangulation of the data and therefore contributes to the reliability and validity of findings ascribed to the mindfulness intervention.

The use of interviews provided an exploration of the internally experienced effects of cultivating mindfulness. While focus groups were also considered it was felt that they would have been more useful for bringing out discussion and capturing shared and/or contrasting responses. As the intention of the qualitative phase was to expand initial quantitative findings it was decided that this would be best achieved by implementing interviews, as this method allowed for more in depth and detailed personal experiences to be explored. The use of semi-structured interviews was deemed appropriate, enabling the researcher's pre-determined open questions to be integrated with participant's accounts of their personal experience of mindfulness, whilst allowing for further enquiry (Hennelly, 2011). Finally, thematic analysis was chosen as the technique for analysing the interview data due to its flexible use as a research tool, compatibility with a critical realist epistemological position and clear guidelines for its use (as per Braun & Clarke, 2006). The methodological choices in relation to quantitative methods will now be discussed.

The use of multiple informants was a key influencing factor in the selection of quantitative measures. For example, The SDQ questionnaire was chosen as it allowed a multi-informant perspective of students' internalising problems to be obtained. This is in line with recommendations set forth by Felver et al., (2016) suggesting that the use of multiple informants in studies of MBIs helps to reduce measurement error and enables a comprehensive assessment of student functioning to be obtained.

Instruments were also chosen based on the degree to which they were considered practical, understandable and convenient for participants. Initially the Child Behaviour checklist (CBCL; Achenbach, 1991) was considered as a possible measure of internalising problems, as similar to the SDQ it provides a teacher, parent and student report form. However the practical considerations of time demands, for teachers and parents in particular, were prioritised and thus the 113-item CBCL was deemed too lengthy for the current study. The SDQ was not only selected on account of its brevity, i.e., 25 items, but in addition to its use across CAMHS services as an indicator of mental health problems and it's reported acceptability to parents/teachers due to a greater emphasis on positive attributes (Goodman, 1999)

The WEMWBS was chosen as a measure of well-being due to its previous use in .b studies (Hennelly, 2011; Kuyken et al., 2013). In addition Lloyd and Devine (2012) recently found good levels of consistency and reliability for the WEMWBS in a sample of the population in Northern Ireland. The inclusion of a mindfulness process measures was also important, to investigate whether participation in a mindfulness programme actually developed mindfulness skills. Reviewing the literature provided information on how other researchers gathered information of this type. For instance Tan and Martin (2015) employed the AFQ-Y and CAMM in their

randomised controlled trial of a mindfulness based group intervention for adolescents with mixed mental health disorders. These measures were thus chosen for use in the current study as they were found to be acceptable and developmentally appropriate for young people experiencing mental health difficulties. In addition self-report measures are reported to be a suitable way of capturing a young person's response to their internal experiences, (e.g., present-centered awareness, cognitive and emotional strategies), which may not be possibly detected by outside observers (Greco et al., 2008). Self-report questionnaires are therefore useful and frequently used in mindfulness intervention studies with young people (Felver et al., 2013; Zoogman et al., 2014).

When carrying out research it is important that findings are deemed trustworthy. In order to establish trustworthiness the research must ensure that efforts are made to build validity into different phases of the research from data collection through to data analysis and interpretation. The current study is an example of applied 'real world research' (Robson, 2011) having taken place in the context of the participating EOTAS setting. It is through conducting research in this 'real world' educational context, as opposed to a laboratory setting, that the research process becomes more susceptible to threats that may impact on the validity and reliability of any findings obtained (Robson, 2011). These will now be considered, along with those steps taken to address these potential threats.

Validity often signifies "the level of quality and rigor of research and can have a significant impact on the quality of inferences that are generated from a study" (Zachariadis, Scott & Barrett, 2013, p.858). Three main types of validity are often considered when carrying out quality research: construct, internal and external

validity. Construct validity is concerned with whether the measures actually measure the construct they intended to. Applied to the current study construct validity refers to whether, for example, the CAMM (Greco, Baer & Smith, 2011) actually measures participant's levels of mindfulness. As a means of addressing construct validity, the measures used in the quantitative element were selected as they had been previously validated, published and used in related research studies. The items within the scales used also had good face validity, (i.e. scale items were related to the constructs of interest and sensitive to the topics under investigation such as emotional distress). However because it relies on subjective judgment, face validity is not considered a stringent criterion for determining validity. Nonetheless in this context the face value of scales was considered important and participants appeared to find the measures understandable and easy to complete.

Internal validity refers to the extent to which any effects found within a study can be considered due to the manipulations of the identified independent variable (Shadish, Cook & Campbell, 2002). In the case of this study the use of a pre-test, post-test and follow-up design allowed for the immediate and sustained effects of the intervention to be measured. However the changes reported should be considered exploratory, given the absence of a control group and controlled environment. This thus limits our ability to confidently conclude that the observed effects (dependent variable) are attributable to the intervention (independent variable) (Shadish, Cook & Campbell, 2002). While this is a limitation of the study, steps were taken to strengthen the validity of data evaluation and findings. These included the use of a longitudinal element (i.e., long-term data collection at five month follow-up), peer examination (i.e., the research findings and data was reviewed by experienced,

independent academics) and the employment of triangulation. Triangulation incorporated the use of method triangulation; use of interview and questionnaires to gather data) and data triangulation; use of multiple-informants (Bryman, 2008). Taken together it is hoped that the methods applied have helped to strengthen the internal validity of the study.

External validity refers to the extent to which the findings of the study can be generalised to other populations (Robson, 2011). The small-scale nature of the current study means that external validity was difficult to establish yet the following actions were employed to maximise the external validity of those findings obtained:

- Providing descriptions of the research context/setting, participants and intervention programme;
- The use of published quantitative measures, employed in similar research studies, that show good content, construct and face validity;
- Providing participants with access to support (i.e., school staff) for completing questionnaires as required, in an effort to reduce participant error.

Reliability refers to the consistency of the study's findings, for example whether participant's scores in quantitative measures are 'consistent and stable over time' (Creswell & Plano Clark, 2007, p. 133). In the case of this study the use of self-report measures may have been affected by biases, including participant bias or social desirability, which may influence the reliability of the results. Social desirability is suggested to occur when participants report what others will favour instead of what they may report to be their 'real' situation (Tan & Martin, 2015). In this current study

it is suggested that while early social desirability bias may have contributed to increased mindfulness scores initially, i.e. during the intervention, it is less likely to have influenced the sustained scores from post intervention to five month follow up, as the initial enthusiasm for the programme may have diminished (see McCowan, Neville, Crombie, Clark & Warner 1997 for a full discussion). To further guard against participant bias, specific details regarding the purposes of the measures were not discussed until the final debrief session and during the study participants were informed that there were no wrong or right answers to the questions as part of the questionnaires.

It is important to note that reliability and validity do not solely refer to quantitative data but also pertain to qualitative data. However, there is considerable disagreement about how positivist criteria of reliability and validity can be addressed in qualitative research (Denzin & Lincoln, 1998). At the same time there is a call for some evaluative criteria to guide qualitative research process and confirm its 'trustworthiness', therefore the terms credibility, transferability, dependability and confirmability are typically used and will each be discussed in turn.

According to Patton (2002) the credibility of the researcher is especially important in qualitative research, as it is the person who is the major instrument of data collection and analysis. Retaining a critical realist position it is important to note that while every effort was made to ensure the quality of the research, it was also accepted that the researcher would have a certain amount of influence on the knowledge produced. A potential threat to the credibility of this study was the role adopted by the author, as principal investigator and facilitator of the intervention. Himelstein, Hastings, Shapiro & Heery (2012) draw attention to this 'dilemma' in

mindfulness research. The authors suggest that while the relationship between the facilitator and participants could potentially influence outcomes reported in interviews, this rapport may also be necessary when collecting data of this kind from more vulnerable groups. For instance it is possible that students may not have felt as open or comfortable talking with an unknown interviewer about their personal experiences of learning mindfulness. In addition the finding of 'challenges to practicing mindfulness' suggests that students' reports were not only positive and perhaps indicates that they were more honest about their experiences. While the ideal situation would have been to employ a secondary investigator, with some degree of familiarity to the students, the constraints of time, resources and other practicalities meant that adopting this 'dual role' was the most feasible and effective for the purpose of this current study.

Transferability refers to the generalisation of findings from a qualitative project. True generalisability of findings derived from qualitative data can be difficult as 'all observations are defined by the specific contexts in which they occur' (Shenton, 2004, p.69). Contextual information was therefore provided on the participants, research setting (i.e., EOTAS) and intervention to assist the reader to consider whether the findings could be applicable to a similar situation. To ensure dependability a detailed and clear description of the qualitative processes used by the researcher was reported (i.e., research design, data collection, stages of thematic analysis, interpretation of findings and reported results). Decisions made, and justifications for these decisions, were also made thus providing an 'audit trail' of the course of research on a step-by-step basis (Shenton, 2004).

Finally actions to meet the criteria of conformability were taken to ensure the views and experiences of the participants were portrayed, rather than the characteristics and preferences of the researcher (Shenton, 2004). One important method used was 'frequent debriefing sessions' (Shenton, 2004, p. 67) which involved regular meetings with an academic tutor and an independent qualitative researcher to discuss key decisions as part of the qualitative process (i.e. interview schedules, checking emerging themes and refining themes). This allowed for interpretations to be further developed, assumptions to be questioned and alternatives to be considered. In addition the use of follow-up interviews allowed the researcher to check whether the ideas recorded were representative of the views expressed by participants. Overall it is hoped that making the epistemological and theoretical position explicit and addressing the criteria for reliability, validity and trustworthiness has helped, in part, to address potential study limitations and enhance the rigor and veracity of the current research findings.

3.4 Intervention considerations

The .b programme is a manualised programme and was designed in line with principles identified as important in the implementation of school-based programmes that promote mental health and well-being (Kuyken et al., 2013). One of these principles includes 'programme implementation that pays close attention to clarity and fidelity, supported by a manual and indicative script' (p.2). The .b manual clearly articulates the core program components which ensures 1) essential features of the programme are delivered, 2) aids the training of facilitators to effectively deliver programme curriculum and 3) helps clarify what practices various programmes have

in common (Gould, Dariotis, Greenberg & Mendelson, 2016). However some authors note that within the peer reviewed literature on mindfulness there has tended to be an over focus on defining these 'core content components', underplaying the importance of 'process components' (Gould et al., 2016). This has been previously described by Himelstein (2011) as "the push to attribute manualised interventions' efficacy on the content of the manual alone with no regard to the facilitators" (p.8). Process components including, for example, facilitating student discussion or modelling non-judgmental acceptance, rely on the facilitator's individual qualities, experience and skills and are argued to be essential to the implementation of program fidelity (Gould et al., 2016). Process components specific to mindfulness include the ability of the facilitator to be 'in the moment' and respond flexibly to the needs of students, rather than adhering to a strict manualised curriculum (Kabat-Zinn, 2011). The .b manual offers some guidance, encouraging facilitators to 'do the practice', as a way of staying connected to the experience of teaching and responding to students as the lessons unfold. However the ability of a facilitator to respond to the needs of students in the present moment, while maintaining the integrity of the programme's core components, is a complex skill.

This highlights a further key issue. While there are criteria that have to be fulfilled to take part in the .b training (i.e., completion of MBSR course and at least 6 months personal mindfulness practice) currently mindfulness teachers are not regulated by any professional or governing bodies. In contrast an EP wishing to deliver a MBI must have regard to professional standards[47] and training and

[47] British Psychological Society *Code of Ethics and Conduct* (2009) and the Health and Care Professions Council *Standards of Conduct, Performance and Ethics* (2009).

supervision are necessary to practice in the boundaries of competence (Iyadurai et al. 2014). Crane, Kuyken, Hastings & Williams (2010) refer to a number of competencies which are considered important in the delivery of mindfulness groups including, interpersonal skills, facilitating group discussion and inquiry and engaging students through interactive and didactic teaching. These skills are reported to be shared by applied psychologists (Iyadurai, et al., 2014). The 'embodiment of qualities of mindfulness' is also an essential component (Crane et al., 2010) which would appear to derive from the individual's own practice of mindfulness.

It should also be borne in mind that additional skills and experiences are required when delivering mindfulness interventions to targeted groups (e.g., students referred for ABSR). In the case of this study the EOTAS provision, and its partnership services, offered a highly specialized and protected environment in which a mindfulness intervention could be feasibly embedded. However given the complex skill and competencies required in delivering a group mindfulness intervention to apparently 'healthy students' it is essential that schools take note of the expertise and training of those delivering groups to more vulnerable student populations. The supervision and training received as part of the doctorate programme was thus essential to support the implementation of the current intervention.

To conclude this section the modifications that were made to suit the unique needs of the students will be described. Adjustments to the programme were made in consultation with EOTAS staff on the day of the lesson and in subsequent supervision sessions. The first adaptation worth noting was made in Lesson 3 in relation to the 'body scan' practice or as termed by the .b programme 'Beditation'. Although 'Beditation' is typically practiced lying down, the majority of the students expressed

their preference to remain seated (e.g., due to discomfort or feeling self-conscious). The exercise was thus practiced in a seated position and students were encouraged to try out a full-length body scan in a place they felt comfortable (e.g., lying down in bed). In Lesson Four the home practice also needed to be modified as it involved texting a partner from the class, i.e., with a "**.b** " as a cue for the text recipient to '**Stop**, feel their feet, **Breathe** and **Be**'. Some students remarked that they 'didn't always have phone credit' or 'didn't have their peer's numbers' and therefore an alternative home practice was developed, i.e. each student was given a "**.b**" sticker which they could put up in the classroom, give to someone else or keep for themselves. In the final session (Lesson 9) the students were given 'Certificates of Achievement' along with refreshments as a way of marking their completion of the programme. Students were given a booklet, containing links to sound files, a description of lessons and practices, which gave them specific ways to continue practicing what they had learned, if they so wished. Therefore in terms of .b and fidelity, the author adhered faithfully, rather than rigidly to the .b programme and this allowed for adaptations to be made to ensure students' needs were acknowledged and incorporated.

3.5 Future Directions

This research was conducted to explore the feasibility and potential usefulness of introducing students, referred for ABSR, to mindfulness skills in an EOTAS setting. The study makes a distinct contribution as the author found no literature that has linked the areas of mindfulness and school refusal. Future research is thus needed to fully investigate the efficacy of .b as an intervention component for ABSR by addressing the aforementioned limitations. This current research has also generated

some interesting questions, which could be explored in future studies.

Future research could clarify what components of the .b programme are most helpful to students experiencing ABSR and how they are related to hypothesised outcomes. Findings from this study suggest that practices involving focused attention (breathing, awareness of whole body and movement) and open monitoring (observing thoughts and emotions) were more readily applied and incorporated in students' daily lives in comparison to compassion or gratitude practices (cultivating feelings of gratitude and kindness towards self/other). It may be the case that the core mindfulness component of compassion needs to be introduced earlier (i.e., currently taught in lesson 8) or incorporated in more varied ways throughout the programme. Further research, with larger samples, could examine whether enhancing this specific component would benefit students with ABSR, e.g., showing a compassionate response to naturally arising unpleasant thoughts/emotions, and how these potential refinements to the programme should be made.

Following from this the role of psychological inflexibility in ABSR could be further explored. The inclusion of this process measure was driven in part by theory, (i.e., school refusal was hypothesised to be associated with experiential avoidance and cognitive fusion) and due to its use as an outcome measure in previous mindfulness studies with clinical adolescent groups (Tan & Martin, 2015). It is worth noting that significant reductions in psychological inflexibility found in Tan & Martin's (2015) study were derived from the AFQ-Y8, short version, rather than the 17-item AFQ-Y used in this study. Therefore it may be possible that the AFQ-Y8 is more sensitive to clinical change and may be a more appropriate measure for use in future studies

involving adolescent populations characterised by emotional distress. More research is necessary to support this conclusion.

Given the heterogeneous nature of school refusal future MBI studies could include a wider range of possible outcomes such as perceived stress, resilience, optimism, academic outcomes (achievement and attendance) as well as specific psychological symptoms (anxiety and depression). In the case of this study the use of third party report measures was also limited by parent's low response rate at 5-month follow up, i.e., 25% (n=2). While every effort was made to make this process as convenient as possible it raised important issues for the author, namely how to promote parent participation in the study after the intervention was completed. In hindsight it is felt that a debriefing session, similar to the format of the parent information evening, could have provided a way of feeding back to parents on the intervention and promoting the importance of their participation within the research study. This is something that could be considered for future implementation of the .b programme.

3.6 Further Implications for Educational Psychologists

The role of an EP in supporting school refusal can encompass a range of activities including, for example, 'psychological approaches to help reduce anxiety and feel more confident about attending school' (Derbyshire Educational Psychology Service, p. 26) 'group based intervention with a psychological basis' (Carroll, 2015) and taking a broader perspective of school refusal by considering the importance of facilitative and protective factors that could be promoted through effective intervention (Gregory & Purcell, 2014; Nuttall & Woods, 2013). The implementation

of mindfulness-based activities is suggested as one way in which an EP can meet these objectives. Delivering a school-based mindfulness intervention also addresses one of the challenges that EPs face in adapting their developing role within children's services; anxiety regarding professional competence and confidence to deliver something new (Fallon, Woods, & Rooney, 2010). This study therefore supports the ability of the Educational Psychology Services to work with targeted groups of young people and provide psychological interventions in the promotion of social and emotional well-being. Preliminary evidence from this research also suggests that delivering a group-based intervention is feasible, acceptable and effective. Therefore enabling access to interventions of this type (both at a universal and targeted level), as part of the school's time allocation model may offer a way of supporting a greater number of young people, as opposed to 'a practice focused primarily on single-agency, reactive assessments' (O'Callaghan & Cunningham, 2015, p.324). This research therefore supports the development of EPs' other functions in children services, including intervention and research (Fallon et al., 2006).

The role of an EP is suggested to include translating new and promising research into applied practice therefore the evaluation of group interventions could add value to this area of working. In doing so, EPs could be encouraged to use a multi-informant approach for assessing student progress. The current research incorporated student, parent and teacher report measures, enabling triangulation of evaluative information and observations of key informants to be captured. However the potential administrative burden of employing questionnaires should also be considered as well as the impact this can have on effective data collection. To address this parents and/or teachers could be given the option of completing

questionnaires online or responding by email correspondence. The EP could also lead a questionnaire completion session at pre-intervention, post-intervention and follow-up, which could serve to maintain parent/teacher engagement, maximise data collection opportunities and provide debriefing upon study completion. It may also be advisable to include more objective measures such as records of attendance, to evaluate the effectiveness of the intervention with young people at risk or experiencing school refusal. In addition the use of pre-intervention measures of psychological symptoms, for example anxiety and depression, may also enable EPs to make judgements about suitability of students to the intervention and to help inform decision making in relation to onward referral, if appropriate.

The qualitative aspect of this study lead to a more in depth understanding of how training in mindfulness facilitated positive changes, such as participants' increased ability to cope with distress and stressful situations. Seeking the views of young people experiencing school refusal could therefore be incorporated into 'best practice within an Educational Psychology service' (Gregory & Purcell, 2014, p.37), allowing a more comprehensive view of intervention effectiveness, acceptability and feasibility, to ensure the most useful aspects of the intervention are prioritised. This information could help refine and improve future interventions for this group. Collecting data of this type would also enable comparison with the findings obtained within this current study, thus strengthening the base of evidence for EP intervention work and school-based approaches for the intervention of school refusal.

EPs delivering school-based interventions with more vulnerable student populations could consider creating a safe space, both physically and psychologically,

where students feel they can relax, de-stress or experience 'me time'. In the case of this study creating this environment appeared to be key to the successful implementation of a mindfulness intervention with students. EPs who are interested in delivering targeted interventions with more vulnerable student groups could also consider the importance of establishing trust or being seen as 'part of the school' (Bluth et al., 2015). The findings from this study suggest that participating in non-structured activities (i.e., lunch, art) provided the opportunity to establish more informal relationships with the students outside of the mindfulness sessions. This helped to create a therapeutic environment where students could fully engage and participate in the learning experience. Following from this, EPs should also be aware of the need to adapt interventions to accommodate the unique needs of the students they are working with. For example EPs may need to consult with teachers and other support staff before each lesson to ascertain whether the concepts, skills and practices to be introduced are developmentally appropriate and acceptable to particular student groups.

This study promotes the contribution of EP 'practioner research', and engaging in work of this type is noted to be one of they ways in which EPs can make valuable contribution to both professional practice and applied research (Fox, 2011). EPs could therefore be encouraged to use their applied researcher skills to investigate the efficacy of interventions and in doing so could help fulfil the need that EPs express for a more rigorous, scientific approach to their work (O'Callaghan & Cunningham, 2015). In addition it has been suggested that the choice of an intervention should be informed by the EPs expertise in a certain area (Fox, 2011). In the case of this study delivering a group-based mindfulness intervention has enabled

continued professional development of a research interest and could, in the future, lead to an area of specialism (Fallon et al., 2010; O'Callaghan & Cunningham 2015). EPs with an expertise in particular areas of interest could therefore be encouraged to engage in practice-based evidence, helping to move the profession forward, and to 'turn their own experience into professional expertise' (Fox, 2011, p, 334).

A final implication for practice is in relation to the role mindfulness could play in the wider work of EPs. For example, Hart, Breton & Reavill (2014) describe how a mindfulness interest group within Community Educational Psychology Services (EPS) in Suffolk provided the opportunity to 'discuss mindfulness, share research and practice as well as engaging in mindful-enhancing activities' (p.16). It is thus suggested that this could be a potential way of introducing interested EPs, working in the EA in Northern Ireland, to the topic of mindfulness and its potential benefits. EPs may also be interested in learning mindfulness themselves, to reduce stress at work or it could be introduced as a workplace self-care activity. A measured and gradual approach to the inclusion of mindfulness in EP practice is thus suggested, to ensure the future application of mindfulness in schools is delivered competently and faithfully by EPs who have a full understanding of what mindfulness entails.

3.7 Further Implications for EOTAS Settings

An essential part of EOTAS provision is to meet the social and emotional needs of students including the provision of appropriate therapeutic intervention. However EOTAS settings have reported that they are experiencing an increase in the number of young people with mental health and anxiety-based conditions (Northern Ireland Assembly, 2015). There is thus a need for building the capacity of

professionals who work in these settings, such as EPs, to provide psychological services that are evidence-based and responsive to this demand. This current study provides preliminary support for the feasibility and acceptability of mindfulness-based programme in EOTAS settings and thus suggests that it may be embedded as a potentially efficacious intervention component.

While this research was carried out in a specific EOTAS setting with a distinct group of students, thus limiting the generalisability of the findings, it is possible that the broad benefits students reported could be experienced by students in other EOTAS settings. In addition this study found beneficial effects that had impact relatively quickly, i.e. after 9 weeks, and were sustained after the intervention was completed. It is therefore proposed that learning mindfulness could be used to meet students' social and emotional needs and help, in part, young people to overcome the barriers that possibly prevent them from attending mainstream school.

3.8 Personal Reflections

As well as being part of the course requirements for the Doctorate in Educational Child and Adolescent Psychology this research project has been a valuable learning experience. While many aspects of the doctorate training begin in one semester and end in the next, the research component spans the duration of the entire three years, thus appropriately referred to as a research 'journey'. On reflection of this research journey it is felt that the author acquired a number of skills, both professional and personal, which will be discussed in the following paragraphs.

Academically the research project has facilitated further development in the author's ability to critically appraise literature and conduct applied psychological

research in real world settings. Conducting a systematic review for the purpose of this research was a new and initially challenging task. In contrast to narrative literature reviews, previously completed by the author, systematic reviews use a predefined and explicit methodology. Skills of critical evaluation and research synthesis were therefore tested and developed.

Given the emphasis placed on "evidence based research" the development of these skills is considered significant and will usefully transfer to future working as an EP, perhaps when sharing research or deciding on the quality of evidence that can be used to inform psychological practice. Conducting research in a 'real world setting' could be described as a process of learning and discovery. Making initial contact with the EOTAS setting, where the research was conducted, was a relatively straightforward process and both the Principal and VP were open and enthusiastic about the proposed intervention. However the practicalities of obtaining consent and administering questionnaires was a more difficult task. As the author was not on site, the collection of these consent forms took longer than expected and therefore the intervention started later than anticipated. The administration and collection of parent and teacher questionnaires proved to be another difficult process. While the VP expressed her satisfaction with the programme overall she also reported that the evaluation, i.e., use of questionnaires, was quite time consuming as teachers were 'very busy' and parents often had to be 'chased up'. Scheduling specific data collection sessions (i.e., 10 minutes before/after school) or using online methods may have provided a more efficient way of collecting this data. Therefore while there is an increased emphasis on evidence-based practice the reality and practicalities of conducting research in school settings should also be considered. Nevertheless the

author believes that the evaluation of interventions are important, both to inform practice and contribute to the evidence base. In addition it has been identified as an important aspect of an EP's role 'to act as an intermediary between research and educational professionals' (Iyadurai, 2014, p.12).

On a personal level delivering a mindfulness-based intervention was challenging. Firstly the intervention was carried out while the author was on placement, roughly 45-minute drive from the EOTAS. This required a high level of organisation, including preparation of lessons and materials, careful scheduling of session times as well as keeping on top of placement cases. To ensure a high quality of delivery it was also essential to follow the core principles of mindfulness including, for example, non-judgmental acceptance, compassion for self and other, and personal embodiment of the qualities of mindfulness. To support this, I maintained a daily mindfulness practice and attended a weekly meditation group. However, there were occasions when the author arrived to the EOTAS feeling 'mind-full' rather than 'mindful'; stressed, hurried and unprepared. Initially this brought about a sense of frustration, striving to be 'calm and composed' and at the same time judging myself for not being this way "*you shouldn't be feeling stressed*", "*you should be more relaxed*". At this stage the author realised that this attitude could well have negative consequences for the quality of teaching, for example cultivating the patterns of judgment and striving instead of openness, acceptance and kindness (Shapiro et al., 2006). To address this a conscious commitment was made to do a 'mindful check in' before sessions; intentionally becoming aware of thoughts and feelings and accepting them as states that are arising and will pass away. Surprisingly this short practice had a notable impact on the sessions, facilitating an increased sense of calm and patience.

This experience was shared with students to help them understand that while mindfulness can lead to effective change, and this takes effort, it doesn't come from striving or trying to 'fix' yourself. It's about relating to experience with awareness and acceptance, and letting go of the 'add-ons' that often make a difficult situation much worse. Process learning such as this proved to be an invaluable experience, for both the facilitator, students and the quality of the programme overall.

Another aspect that supported reflection during the course of the research was supervision. One particular supervision session stands out, where a connection was made between my interest in mindfulness and my personal experience of secondary school. Care of the pupil, as a unique human being, was central to the philosophy of the secondary school I attended. The education I received emphasised training the character and will of students, while developing respect and care for others. This aligns well with the idea of school as a key therapeutic context (DfE, 2001) and its position as a key microsystem for the child, a concept derived from Bronfenbrenner's (1977) Ecological Systems Theory. Reflecting on this in supervision I was able to see how my views on education developed and were informed, in part, by my previous experience within the school system. A mainly positive experience of education, in which my academic, social and emotional needs were met, may have thus influenced my interest in promoting the emotional well-being of students through the practice of mindfulness. However it was important to bear in mind that the student participants may have held different values, attitudes and beliefs to my own, and quite possibly a more negative experience of school. Therefore discussions of school experiences were participant led, rather than imparting my own assumptions and attitudes. Being aware of my own biases, both positive and negative, allowed me to approach topics of

discussion sensitively, by remaining curious and respectful of individual experiences within the school system.

A final area of contemplation was based on how the research aligned with the profession of Educational Psychology. An awareness of the systems within Northern Ireland and a constant reminder of the emphasis placed on the assessment of the learning needs of school aged children in the work of EPs made this a challenging task. In addition as mindfulness is a considerably new intervention in schools it is possible that some EPs are unaware of the term and, if this is the case, there may be ambiguity around what it 'looks like' in practice and how it could be feasibly implemented in schools. A continuing professional development (CPD) day for EPs in Northern Ireland provided a good opportunity to present preliminary research findings[48] and provide information on the possible benefits of mindfulness based-activities. The importance of promoting and protecting students' well-being was expressed by EPs in conversation, which lead to some additional comments on the need to embrace alternative approaches, such as mindfulness, to keep the pace of a rapidly changing school environment. One EP was particularly interested in how mindfulness could potentially offer an antidote to young people's dependence on technology, providing time away from constant distraction and the value this posed amidst a pressured school day. Overall EPs were curious and interested in how mindfulness could be potentially useful in their work, as a way of promoting the emotional well-being of young people in EOTAS and mainstream settings.

[48] A poster was presented as part of the TEP input for the CPD day in February 2015

In summary despite the extreme learning curve and extent of work involved in delivering the .b programme the benefits gained, both professionally and personally, were considerable. Perhaps the greatest benefit was the realisation that the participants found learning mindfulness enjoyable and relevant and were motivated to apply the practice in ways that were personally meaningful. The author felt especially privileged to have had the opportunity to guide these students through the practice of mindfulness, and despite the emotional challenges they faced at school the students were open and welcoming, making for a truly rewarding teaching experience.

3.9 Conclusions

This research adopted a critical research approach accepting that reality is experienced in many ways by complex individuals with differing values, ideas and interpretations. The research project was thus a product of collaboration, aligning theory with practice in a co-operative approach between the author; as 'researcher', 'facilitator' and 'trainee educational psychologist', and the students, teachers and parents who shared their time, learning and experiences. It is hoped that this sharing will go towards providing insight into how mindfulness can benefit students experiencing difficulty with school attendance and highlight the importance of teaching them skills which they can use to purposefully add value to their lives. It is anticipated that this research should not only inform the effective intervention for school refusal, but also the practice of EPs in the work of promoting the emotional well-being of our children and young people.

4.0 References

Achenbach, T. M. (1991). Integrative guide for the 1991 CBCL/4-18, YSR and TRF profiles. Burlington: Department of Psychiatry, University of Vermont

Angold, A., Costello, E. J., & Messer, S. C. (1995). Development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. *International Journal of Methods in Psychiatric Research*, 5, 237–249.

Baer, R. (2003). Mindfulness training as clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice, 10*, 125-143.

Barrett P.M., Farrell, L. J., Ollendick, T. H., & Dadds, M (2006). Long-term outcomes of an Australian universal prevention trial of anxiety and depression symptoms in children and youth: An evaluation of the Friends program. *Journal of Clinical and Adolescent Psychology, 35 (3),* 403-411.

Belfast Education and Library Board (BELB) (2012). Procedural guidelines for the provision of education otherwise than at school. Retrieved from http://www.belb.org.uk/Downloads/cyps_education_options_panel_procedural_guidelines_review.pdf

Bennett, K. & Dorjee, D. (2016). The impact of a mindfulness-based stress reduction course (MBSR) on well-being and academic attainment of sixth-form students. *Mindfulness, 7,* 105-114.

Berg, I. (1992). Absence from school and mental health. *The British Journal of Psychiatry, 161,* 154-166.

Bernstein, G. A., Hektner, J. M., Borchardt, C. M., & Mcmillan, M. H. (2001). Treatment of school refusal: One-year follow-up. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 206-213.

Bhaskar, R. (2013) *A Realist Theory of Science*. London: Routledge

Biegel, G.M., Brown, K.W., Shapiro, S.L., & Schuburt C. M. (2009). Mindfulness based stress reduction for the treatment of adolescent psychiatric out patients: A randomized clinical trial. *Journal of Consulting and Clinical Psychology. 77 (5),* 855-866.

Bihari, J. L. N., Mullan, E. G. (2014). Relating Mindfully: A qualitative exploration of changes in relationships though mindfulness-based cognitive theory. *Mindfulness, 5,* 46-59.

Black, D.S., Milan, J., & Sussman, S. (2009). Sitting meditation interventions among youth: A review of treatment efficacy. *Paediatrics*. doi 124;e532-e541

Blagg, N., & Yule, W. (1984) The Behavioural Treatment of School Refusal- a comparative study. *Behaviour Research and Therapy, 22,* 119-127.

Bluth, K., Campo, R.A., Pruteanu-Malinci, S.,Reams, A., Mullarkey, M. & Broderick, P.C. (2015). A school-based mindfulness pilot study for ethnically diverse at risk adolescents. *Mindfulness*. doi: 10.1007/s12671-014-0376-1

Braun, V. and Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology. 3 (2),* 77-101.

Broderick, P. C., & Metz, S. (2009). Learning to BREATHE: A pilot trial of a mindfulness curriculum for adolescents. *Advances in School Mental Health Promotion, 2 (1),* 35-46.

Bronfenbrenner U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32,* 515–31.

Bryman, A. (2008). *Social Research Methods, 3rd Edition*. Oxford: University Press.

Burke, C.A. (2010). Mindfulness based approaches with children and adolescents: a preliminary review of current research in an emerging field. *Journal of Children and Family Studies, 19,*133-144.

Burnett, R., Cullen, C., & O'Neill, C. (2011) .b, Mindfulness in Schools Project. Retrieved from http://mindfulnessinschools.org

Cairns R. B., Leung M., Gest S. D., & Cairns B. D. (1995). A brief method for assessing social development: structure, reliability, stability, and developmental validity of the Interpersonal Competence Scale. *Behaviour Research and Therapy*, *33,* 725-736.

Carroll, T. (2015). Pupil absenteeism and the educational psychologist. *Educational Studies, 41(1),* 47-61.

Challen, A., Noden, P., West, A., & Machin, S. (2009). UK Resilience programme evaluation: interim report. DCSF-RR094. Department for Education, London, UK.

Chambers, R., Gullone, E., Hassed, C., Knight, W., Garvin, T., & Allen, N. (2015). Mindful emotion regulation predicts recovery in depressed youth. *Mindfulness, 6,* 523-534.

Chitiyo, M., & Wheeler, J. J. (2006). School phobia: Understanding a complex behavioural response. *Journal of Research in Special Educational Needs*, *6*(2), 87-91.

Chu, B. C. & Harrison, T. L. (2007). Meta-analysis of candidate mediators for change. *Clinical Child and Family Psychology Review, 10,* 352-372.

Clarke, A., Friede, T., Putz, R., Ashdown, J., Martin, S., Blake, A., Adi, Y., Parkinson, J., Flynn, P., Platt, S. & Stewart-Brown, S. (2011). Warwick-Edinburgh Mental Well-Being Scale (WEMWBS): Validated for teenage school students in England and Scotland. A mixed methods assessment. *BMC Public Health, 11,* doi: 10.1186/1471-2458-11-487

Cohen, S., & Williamson, G. M. (1988). Perceived stress in a probability sample in the United States. In S. Spacapan & S. Oskamp (Eds.), *The social psychology of health* (pp. 31–67). Beverly Hills, CA: Sage.

Connolly, P., Sibbett, C, Hanratty, J., Kerr, K., O'Hare, L. and Winter, K. (2011) Pupils' Emotional Health and Well-being: A Review of Audit Tools and a Survey of Practice in Northern Ireland Post Primary Schools Belfast: Centre for Effective Education, Queen's University Belfast. Retrieved from http://www.qub.ac.uk/research-centres/CentreforEffectiveEducation/Filestore/Filetoupload,353451,en.pdf

Crane, R. S., Kuyken, W., Hastings, R. P., Rothwell, N., & Williams, J. M. G. (2010). Training teachers to deliver mindfulness-based interventions: Learning from the UK experience. *Mindfulness*, *1*(2), 74-86.

Creswell, J. W. (2009). *Research Design Qualitative, Quantitative, and Mixed Methods Approaches*. London: SAGE.

Creswell, J. W. & Plano Clark, V.L. (2010). *Designing and Conducting Mixed Methods Research*. London: SAGE.

Davis, T. S. (2012). Mindfulness based approaches and their potential for educational psychology practice. *Educational Psychology in Practice, 28*, 31-46.

Dempster, M. (2011). *A research guide for health and clinical psychology*. Palgrave MacMillian.

Denzin N.K. and Lincoln, Y.S. (1998) *Collecting and interpreting qualitative materials.* London: Thousand Oaks California: SAGE Publications

Department for Education and Skills (DfES). (2001). *Promoting children's mental health within early years and school settings*. London: DfES.

Department of Education. (2014) .*Mental health and behaviour in schools: department advice for school staff (*p. DFE-00435-2014). London: Government Publications.

Derbyshire Educational Psychology Service (2012). *Emotionally based school refusal. A guide for primary and secondary school*. Derbyshire County Council, Derbyshire Educational Psychology Service.

Department of Health, Social Services and Public Safety Northern Ireland (DHSSPSNI). (2006) Our Children and Young People: Our Pledge. Belfast: Department of Health, Social Services and Public Safety Northern Ireland.

Department of Health, Social Services and Public Safety (DHSSPSNI) (2009). Developing Excellence Supporting Recovery. A professional framework for mental health nursing in Northern Ireland. Retrieved from http://www.dhsspsni.gov.uk/mental_health_nursing_framework_-_delivering_excellence_d6.pdf

Derogatis, L. (1977). *The SCL-90-R: Administration, scoring and procedures manual.* Baltimore: Clinical Psychometric Research.

Doobay, A. (2008). School refusal behaviour associated with separation anxiety disorder: A cognitive-behavioural approach to treatment. *Psychology in the Schools, 4 (5),* 261-272.

Dorjee, D. (2010). Kinds and dimensions of mindfulness: why it is important to distinguish them. *Mindfulness, 1,* 152-160. doi: 10.1007/s12671-010-0016-3.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B., (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82,* 405-432.

Easton, G. (2010). Critical realism in case study design. *Industrial Marketing Management, 39,* 118-129.

Egger, H., Castello, E.J., & Angold, A. (2003). School refusal and psychiatric disorders: A community study. *Journal of the American Academy of Child and Adolescent Psychiatry, 42,* 797-807.

Elliott, J. G. (1999). Practitioner Review: School refusal: issues of conceptualisation, assessment and treatment. *Journal of Child Psychology and Psychiatry, 40,* 1001-1012.

Ethics Committee of the British Psychological Society (2009). *Code of Ethics and Conduct.* The British Psychological Society. Leicester.

Evans, C. (2010). Reliable and clinically significant change. Retrieved from http://www.psyctc.org/stats/rcsc.htm.

Fallon, K., Woods, K., & Rooney, S. (2010). A discussion of the developing role of educational psychologists within Children's Services. *Educational Psychology in Practice*, *26*(1), 1-23.

Farrell, P., Woods, K., Lewis, S., Squires, G., Rooney, S. & O'Connor, M. (2006). *A Review of the Functions and Contribution of Educational Psychologists in England and Wales in light of "Every Child Matters: Change for Children"*. Nottingham: DfES Publications

Farrell, L.J., Schlup, B. & Boschen, M.J. (2010). Cognitive-behavioural treatment of childhood obsessive-compulsive disorder in community-based clinical practice: clinical significance and benchmarking against efficacy. *Behaviour Research and Therapy, 48,* 409-417.

Felver, J.C., Celis-deHoyos, C., Tezanos, K., & Singh, N.N. (2013). Mindfulness in school psychology: Applications for intervention and professional practice. *Psychology in the Schools, 50 (6),* 531-547.

Felver, J.C., Celis-deHoyos, C., Tezanos, K., & Singh, N.N. (2016). A systematic review of mindfulness-based interventions for youth in school settings. *Mindfulness, 7,* 34-45.

Field, A. (2009). *Discovering statistics using SPSS*. Sage publications.

Flink, E. J. I., Beirens, J. M. T., Butte, D., & Raat, H. (2014). Help-seeking behaviour for internalizing problems: perceptions of adolescent girls from different ethnic backgrounds, *Ethnicity & Health, 19, 2,* 160-177, doi:1080/13557858.2013.801402

Fox, M. (2011). Practice-based evidence–overcoming insecure attachments. *Educational Psychology in Practice*, *27*(4), 325-335.

Fredrickson, B. L. (2004). The broaden-and-build theory of positive emotions.*Philosophical transactions-royal society of london series b biological sciences*, 1367-1378.

Goodman, R. (2001). Psychometric properties of the Strengths and Difficulties Questionnaire. *Journal of the American Academy of Child Psychiatry*, *40 (11)*, 1337–45.

Goodman, A., Lamping, D. L., & Ploubidis, G.B. (2010). When to use broader internalising and externalising subscales instead of the hypothesised five subscales on the strengths and difficulties questionnaire (SDQ): Data from British parents, teachers and children. *Journal of Abnormal Child Psychology, 38 (8),* 1179-91

Gough, D. (2007). Weight of evidence: a framework for the appraisal of the quality and relevance of evidence. *Research papers in education*, *22*(2), 213-228.

Gould, L.F., Dariotis, J.K., Greenberg, M.T., & Mendelson, T. (2016). Assessing fidelity of implementation (FOI) for school-based mindfulness and yoga interventions. A systematic review. *Mindfulness, 7,* 5-23.

Greco, L. A., Baer, R. A., & Lambert, W. (2008). Psychological inflexibility in childhood and adolescence: Development and evaluation of the avoidance and fusion questionnaire for youth. *Psychological Assessment, 20 (2),* 93-102

Greco, L. A., Baer, R. A., & Smith, G. T. (2011). Assessing mindfulness in children and adolescents: Development and validation of the Child and Adolescent Mindfulness Measure (CAMM). *Psychological Assessment, 23*, 606–614

Greenberg, M. T., Domitrovich, C. & Bumbarger, B. (2001). The prevention of mental disorders in school-aged children: current state of the field. *Prevention & Treatment, 4,* 1-62. doi: 10.1037/1522-3736.4.1.41a

Greenberg, M. T. (2010). School-based prevention: Current status and future challenges. *Effective Education, 2*, 27–52.

Gregory, I. R., & Purcell, A. (2014). Extended school non-attenders' views: developing best practice. *Educational Psychology in Practice, 30*, 37-50.

Hanna, D., & Dempster, M. (2012). *Psychology Statistics for Dummies*. Wiley: Chichester

Hans, E.K., & Eriksson (2013). Psychological factors behind truancy, School Phobia and School Refusal. A literature study. *Child and Family Behaviour Therapy, 35 (3),* 228-248.

Harnett, P.H. & Dawe, S. (2012). The contribution of mindfulness based therapies for children and families and proposed conceptual integration. *Child Adolescent Mental Health, 17,* 195-208.

Hart, N., Breton, K., & Reavill, Z. (2014). Bringing mindfulness into Suffolk's community educational psychology service. *DECP Debate, 148,* 15-20.

Hennelly, S. (2011). *The immediate and sustained effects of the .b mindfulness programme on adolescents' social and emotional well-being and academic functioning*. (Doctoral dissertation). Retrieved from

https://mindfulnessinschools.org/wp-content/uploads/2013/03/Immediate-and-sustained-effects-of-dot-b.pdf

Heyne D., King N.J., Tonge B., Rollings S., Young D., Pritchard M. (2002). Evaluation of child therapy and caregiver training in the treatment of school refusal. *Journal of the American Academy of Child and Adolescent Psychiatry*, *41,* 687–69.

Heyne, D. & King, N. (2004). Treatment of school refusal. Barrett, P. M., & Ollendick, T. H. (Eds) pg.- 71-89. *Handbook of interventions that work with children and adolescents: prevention and treatment*. (243-272). Chichester: John Wiley & Sons Ltd.

Himelstein, S., Hastings, A., Shapiro, S & Heery, M. (2012). A qualitative investigation of a mindfulness-based intervention with incarcerated adolescents. *Child and Adolescent Mental Health,* doi:10.1111/j.1475-3588.2011.00647.x

Himelstein, S. (2011). Mindfulness-based substance abuse treatment for incarcerated youth: A mixed method pilot study. *International Journal of Transpersonal Studies, 30 1-2,* 1-10

HM Government. (2004). *Every Child Matters (ECM) Outcome Framework. Well-being: Objectives and Targets*. London: HMSO

Huppert, F. A., & Johnson, D. M. (2010). A controlled trial of mindfulness training in schools: The importance of practice for an impact on well-being. *Journal of Positive Psychology, 5*, 264-274.

Iyadurai, S. (2013) Mindfulness meditation with children. A universal preventative approach? *Debate, 148,* 22-26.

Iyadurai, S, Morris, J, Dunsmuir, S. (2014). Mindfulness within educational psychology practice: Possibilities and constraints. *Debate, 150,* 9-14.

Jacobson N. S., Truax, P. (1991). Clinical significance: a statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology, 59,* 12-19.

Johnson, A. M., Falstein, E. I., Szurek, S. A., & Svendsen, M. (1941). School phobia. *American Journal of Orthopsychiatry*, *11*(4), 702.

Jones, D. (2011). Mindfulness in schools. Retrieved from https://thepsychologist.bps.org.uk/volume-24/edition-10/mindfulness-schools

Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain and illness*. New York: Delacorte.

Kabat-Zinn J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice, 10,* 144-156. doi: 10.1093/clipsy/bpg016.

Kabat-Zinn, J. (2004). *Wherever you go, there you are.* London: Piaktus.

Kabat-Zinn, J. (2011). Some reflections on the origins of MBSR, skilful means, and the trouble with maps. *Contemporary Buddhism, 12 (1),* 281-306.

Kallapiran, K., Siew, K., Kirubakaran, R., & Hancock, K. (2015). Effectiveness of mindfulness in improving mental health symptoms of children and adolescents: a meta-analysis. *Child and Adolescent Mental Health.* doi:10.1111/camh.12113

Kazdin A. E., Rodgers A, & Colbus D (1989). The hopelessness scale for children. Journal of Consulting and Clinical Psychology, *54,*241-245.

Kearney, C.A. (2001). *School refusal behaviour in youth. A functional approach to assessment and treatment*. Washington. DC: American Psychological Association.

Kearney, C.A. (2007). Forms and functions of school behaviour in youth: An empirical analysis of absenteeism severity. *Journal of Child Psychology and Psychiatry, 48, 1,* 53-61.

Kearney, C. A. (2008). An interdisciplinary model of school absenteeism in youth to inform professional practice and public policy. *Educational Psychology Review, 20*, 257-282. .

Kearney C. A., & Albano A.M. (2004). The functional profiles of school refusal behaviour: Diagnostic aspects. *Behaviour Modification, 28,* 147–161.

Kearney, C. A., & Bates, M. (2005). Addressing school refusal behaviour: Suggestions for frontline professionals. *Children and Schools, 27*, 207-216.

Kearney, C. A., & Silverman, W. K. (1996). The evolution and reconciliation of taxonomic strategies for school refusal behaviour. *Clinical Psychology, Science and Practice*, *3*, 339-354

Kessler, R.C., Berglund, P.A., Bruce, M.L., Koch, J.R., Laska, E.M., Leaf, P.J., Manderscheid, R.W., Rosenheck, R.A., Walters, E.E., Wang, P.S. (2001). The prevalence and correlates of untreated serious mental illness. *Health Services Research, 36 (6),* 987-1007.

Khoury, B., Lecomte, T., Fortin, G., Masse, M., Therien, P., Bouchard, V., Chapleau,

M., Paquin, K, & Hofmann, S. G. (2013). Mindfulness-based therapy: A comprehensive meta-analysis. *Clin Psychol Rev, 33 (6),* 763-771. doi: 10.1016/j.cpr.2013.05.005

King, N.J, Tonge, B. J., Heyne, D., Pritchard, M., Rollings, S., Young, D. (1998). Cognitive behavioural treatment of school-refusing children: a controlled evaluation. *Journal of the American Academy of Child and Adolescent Psychiatry, 37,* 395-403.

Kovacs M. (2008). *Children's depression inventory: Technical manual update.* Toronto: Multi Health Systems.

Kuyken, W., Weare, K., Ukoumunne, O., Vicary, R., Motton, N., Burnett, R., Cullen, C., Hennelly, S. & Huppert, F. (2013). Effectiveness of the mindfulness in schools programme: Non-randomised controlled feasibility study. *British Journal of Psychiatry, 203 (2),* 126-131. doi: 10.1192/bjp.bp.113.126649

Last, C. G., Hansen, C, Franco, N. (1998). Cognitive-behavioural treatment of school phobia. *Journal of the American Academy of Child and Adolescent Psychiatry, 37,* 404–411.

Lau, N., & Hue, M. (2011). Preliminary outcomes of a mindfulness-based programme for Hong Kong adolescents in schools: well-being, stress and depressive symptoms. *International Journal of Children's Spirituality, 16 (4),* 315-330. doi: 10.1080/1364436x.2011.639747

Lauchlan, F. (2003) Chronic Non-attendance and intervention approaches. *Educational Psychology in Practice, 19 (2),* 133-146.

Leavey, G., Galway, K., Rondón, J. and Logan, G. (2009). A Flourishing Society: Aspirations for Emotional Health and Well-being in Northern Ireland.

Belfast: Northern Ireland Association for Mental Health. Retrieved from http://www.niamhwell-being.org/SiteDocuments/compass_flourishing.pdf

Lee, R. M., & Robbins, S. B. (1995). Measuring belongingness—the social connectedness and the social assurance scales. *Journal of Counseling Psychology*, *42*(2), 232–241.

Lendrum, A., Humphrey, N., Wigelsworth, M. (2013). Social and emotional aspects of learning (SEAL) for secondary schools: Implementation difficulties and their implications for school-based mental health promotion. *Child and Adolescent Mental Health, 18 (3),* 158-164.

Liehr, P., & Diaz, N. (2010). A pilot study examining the effect of mindfulness on depression and anxiety for minority children. *Archives of Psychiatric Nursing*, *24*(1), 69-71.

Lloyd, K., & Devine, P. (2012). Psychometric properties of the Warwick-Edinburgh Mental Well-being Scale (WEMEBS) in Northern Ireland. *Journal of Mental Health, 21, 3.* 257-263.

Lovibond, R.F., & Lovibond, S.H. (1995). *Manual for the depression anxiety stress scales* (2nd edn). Sydney, Australia: Psychology Foundation.

Maeda, N., Hatada, S., Sonoda, J., & Takayama, I. (2012) School-based intensive exposure therapy for school refusal behavior. *Clinical Case Studies, 11*, 299-311.

Maric, M., Heyne, D. A., De Heus, P., Van Widenfelt, B. M., & Westenberg, P. M. (2012). The role of cognition in school refusal: An investigation of automatic thoughts and cognitive errors. *Behavioural and Cognitive Psychotherapy, 40*, 255-269.

Mason, O. & Hargreaves, I. (2001). A qualitative study of mindfulness-based cognitive therapy for depression. *British Journal of Medical Psychology, 74,* 194-212.

Maxwell, J. A. (2012). *A Realist Approach for Qualitative Research*. London: SAGE.

Maynard, B.R., Brendel, K.R., Bulanda, J.J, Heyne, D., Thompson, A.M. & Pigott, T.D. (2015). Psychosocial interventions for school refusal with primary and secondary school students: A systematic review. *Campbell Systematic Reviews.* doi:10.4073/csr.2015.12

McCowan, C., Neville, R.G., Crombie, I.K., Clark, R.A. & Warner, F.C. (1997). The facilitator effect: results from a follow-up of children with asthma. *British Journal of General Practice, 47,* 156-160.

McEvoy, P., & Richards, D. (2009). A critical realist rationale for using a combination of quantitative and qualitative methods. *Journal of Research in Nursing, 11 (66),* 66-77.

Meiklejohn, J., Phillips, C., Freedman, M. L., Griffin, M. L., Biegel, G., Roach, A., Saltzman, A. (2012). Integrating mindfulness training into K-12 education: Fostering the resilience of teachers and students. *Mindfulness, 3,* 291-307.

Meltzer, H., Gatward, R., Goodman, R., & Ford, F. (2000) *Mental health of children and adolescents in Great Britain*. London: The Stationery Office

Mendelson, T., Greenberg, M.T., Dariotis, J.K., Gould, L.F., Rhoades, B.L., & Leaf, P.J. (2010). Feasibility and preliminary outcomes of a school-based mindfulness intervention for urban youth. *Journal of Abnormal Child Psychology, 38 (7),* 985- 994.

Miller, A. (2008). School phobia and school refusal: Coping with life by coping with school? Frederickson, N., Miller, A., & Cline, T (.) in *Educational psychology. Topics in Applied Psychology.* London: Hodder Education

Milligan, K., Irwin, A., Wolfe-Miscio, M.,Hamilton, L., Mintz, L., Cox, M., Gage, M., Woon, S., & Phillips, M. (2016). Mindfulness enhances use of secondary control strategies in high school students at risk for mental health challenges. *Mindfulness, 7,* 219-227.

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D.G. (2009). Preferred reporting items for systematic review and meta-analysis: The PRISMA statement. *Journal of Clinical Epidemiology, 62,* 1006-1012.

Northern Ireland Assembly (2015) Education other than at school and youth work. Retrieved from http://www.niassembly.gov.uk/globalassets/documents/raise/publications/2015/education/2615.pdf

Nuttall, C., & Woods, K. (2013). Effective intervention for school refusal behaviour. *Educational Psychology in Practice, 29*, 347-366.

O'Callaghan, P., & Cunningham, E. (2015). Can a targeted, group-based CBT intervention reduce depression and anxiety and improve self-concept in primary-age children?. *Educational Psychology in Practice*, *31*(3), 314-326.

O'Reily, A., Illback, R., Peiper, N., O'Keefe, L. & Clayton, R. (2015). Youth engagement with an emerging Irish mental health early intervention programme *(Jigsaw)*: participant characteristics and implications for service delivery. *Journal of mental health*. doi: 10.3109/09638237.2015.1019050

Office of the First Minister and Deputy First Minister (OFMDFM: NI) (2006). A ten-year strategy for children and young people in Northern Ireland 2006-2016. Retrieved from www.dardni.gov.uk/our-children-and-young-people-**ten-year-strategy**

Patton, M, Q. (2002) *Qualitative evaluation and research methods* (3rd ed.) Thousand Oaks, CA: Sage Publications Inc.

Pellegrini, D.W. (2007). School Non-attendance: Definitions, meanings, responses, interventions. *Educational Psychology in Practice: theory, research and practice in educational psychology, 23,* 63-79.

Pina, A. A., Zerr, A. A., Gonzales, N. A.,& Ortiz, C. D. (2009). Psychosocial interventions for school refusal behaviour in children and adolescents. *Child Development Perspectives, 3(1),* 11-20.

Place, M., Hulsmeier, J., Davis, S., & Taylor, E (2000). School refusal: A changing problem which requires a change of approach? *Clinical Child Psychology and Psychiatry, 5*, 345-355.

Prince-Embury, S. (2006). *Resiliency scales for children and adolescent: Profiles of personal strengths*. San Antonio, TX: NCS Pearson, Psych Corporation.

Raes, F., Pommier, E., Neff, K. D, & Van Gucht, D. (2011). Construction and factorial validation of a short form of the self-compassion scale. *Clinical Psychology & Psychotherapy, 18* (3), 250–255. doi:10. 1002/Cpp.702.

Raes, F., Griffith, J. W., Gucht, K., & Williams, J. (2013). School-based prevention and reduction of depression in adolescents: A cluster-randomized controlled trial of a mindfulness group program. *Mindfulness*, *5,* 477-486

Reynolds, C. R., & Richmond, B. O. (1978). What I think and feel: A revised measure of children's manifest anxiety. *Journal of Abnormal Child Psychology*, 6, 271-280

Robson, C. (2002). *Real World Research*. Oxford: Blackwell publishers.

Rosenberg, M. (1989). Society and the adolescent self-image (Rev. ed.). Middletown, CT: Wesleyan University Press.

Sayer, A. (2000) *Realism and Social Science*. London: SAGE.

Schonert-Reichl, K. A., & Lawlor, M. S. (2010). The effects of a mindfulness-based education program on pre-and early adolescents' well-being and social and emotional competence. *Mindfulness*, *1*(3), 137-151.

Seggar, L.B., Lambert, M.J., & Hansen, N.B. (2002). Assessing clinical significance: Application to the Beck depression inventory. *Behaviour Therapy, 33,* 253-269.

Seligman, M. E., & Csikszentmihalyi, M.(2000). Positive psychology. An introduction. *The American Psychologist, 55*, 5-14.

Semple, R. J., Lee, J., Rosa, D., & Miller, L. (2010). A randomized trial of mindfulness-based cognitive therapy for children: Promoting mindful attention to enhance social-emotional resiliency in children. *Journal of Child and Family Studies, 19*, 218-229.

Semple, R. J., Reid, E. F. G., & Miller, L. (2005). Treating anxiety with mindfulness: An open trial of mindfulness training for anxious children, *Journal of Cognitive Psychotherapy, 19,* 379-92.

Shapiro, S.L., Carlson, L.E. Astin, J.A. & Freeman, B. (2006). Mechanisms of mindfulness. *Journal of Clinical Psychology, 62,* 373-390.

Shenton, A.K. (2004) Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*, 63-75.

Silverman, D. (1993). *Doing qualitative research.* London: SAGE.

Silverman, W. K., & Ollendick, T. H. (2005). Evidence-based assessment of anxiety and its disorders in children and adolescents. *Journal of Clinical Child and Adolescent Psychology, 34*, 380-411.

Smith, D. C., Hall, J. A., Williams, J. K., An, H., & Gotman, N. (2006). Comparative efficacy of family and group treatment for adolescent substance abuse. *American Journal on Addictions, 15,* 131–136.

Sinha, U. K., Shrama, V., & Nepal, M. K. (2007). Development of a scale for assessing academic stress: A preliminary report. *Journal of Institute of Medicine*, *23*(1).

Sinha, U.K., & Kumar, D. (2010). Mindfulness-based cognitive behaviour therapy with emotionally disturbed adolescents affected by HIV/AIDS. *Journal of Indian Association of Child and Adolescent Mental Health, 6 (1),* 19-30.

Spielberger, C. D. (1983). *Manual for the State-Trait Anxiety Inventory: STAI (Form Y).* Palo Alto, CA: Consulting Psychologists Press.

Stewart-Brown, S. & Janmohamed, K.(2008). Warwick-Edinburgh Mental Well-being Scale (WEMWBS) User Guide. Retrieved from http://www.cppconsortium.nhs.uk/admin/files/1343987601WEMWBS%20User%20Guide%20Version%201%20June%202008.pdf

Tan, L., & Martin, G. (2012a). Taming the adolescent mind: preliminary report of a mindfulness-based psychological intervention for adolescents with clinical heterogeneous mental health diagnoses. *Clinical Child Psychology and Psychiatry*, 1359104512455182.

Tan, L., & Martin, G. (2015). Taming the adolescent mind (TAU): a randomised controlled trial examining clinical efficacy of an adolescent mindfulness-based group programme. *Child and Adolescent Mental Health, 20 (1),* 49-55.

Tashakkori, A., & Teddlie, C. (2010). Putting the human back in "Human research methodology": The researcher in mixed methods research. *Journal of Mixed Methods Research. 4 (4),* 271-277.

Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S. Parkinson, J., Secker,J. & Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): development and UK validation. *Health and Quality of Life Outcomes, (5) 63,* doi: 10.1186/1477-7525-5-63

Terzian, M., Hamilton, K., Ericson, S. (2011). What works to prevent or reduce internalizing problems or socio-emotional difficulties in adolescents? Retrieved from http://www.childtrends.org/wp-content/uploads/2013/06/2011-34DUPWhatWorksSocio-Emotional.pdf

The Education (Northern Ireland) Order (1996). Retrieved from http://www.educationengland.org.uk/documents/acts/1996-ni-education-order.pdf

Thompson, M., Gauntlett-Gilbert, J., (2008). Mindfulness with children and adolescents: effective clinical application. *Clinical Child Psychology and Psychiatry, 13 (3),* 395-407.

United Nations (2008). Concluding observations from the UN Committee on the rights of the child. Geneva: United Nations. Retrieved from http://www.ohchr.org/EN/HRBodies/CRC/Pages/CRCIndex.aspx

Van Amerigen,M., Mancini, C. & Farvolden, P. (2003) The impact of anxiety disorders on educational achievement. *Anxiety Disorders, 17,* 561-571.

Waters, L., Barsky, A., Ridd, A., & Allen, K. (2015). Contemplative education: A systematic-evidence based review of the effect of meditation interventions in schools. *Educational Psychology Review, 27,* 103-134.

Weare, K. (2010). Mindfulness: The missing piece for SEL? *Business Update.* Retrieved from http://www.social-emotional-learning-update.com

Weare, K. (2012). *Evidence for the impact of mindfulness of children and young people.* Mindfulness in Schools: Exeter.

Weare, K. (2013). Developing mindfulness with children and young people: a review of the evidence and policy context. *Journal of Children's Services, 8(2),* 141-151.

Wells, A. (1990). Panic disorder in association with relaxation induced anxiety: An attentional training approach to treatment. *Behaviour Therapy, 21,* 273–280.

West Sussex County Council Educational Psychology Services (2004). Emotionally based school refusal. Guidance for schools and support services. Retrieved

from https://www.westsussex.gov.uk/idoc.ashx?docid=1aa4057c-00b6-4722-ba4f-38e524f931b9&version=-1.

Wilig, C. (2001) *Introducing qualitative research in psychology: Adventures in theory and method*. Maidenhead: Open University Press

William R.. Shadish, Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Wadsworth Cengage learning; 2nd Edition

Wimmer, M. (2008). School Refusal. *Principal Leadership.* Retrieved from http://www.nasponline.org/resources/principals/School%20Refusal%20April%20NASSP.pdf

Wisner, B. (2008). *The impact of meditation for cognitive-behavioural practice for alternative high school students*. University of Texas, Austin. Retrieved from https://www.lib.utexas.edu/etd/d/2008/wisnerd39451/wisnerd39451.pdf

Wisner, B. (2014). An exploratory study of mindfulness meditation for alternative school student: Perceived benefits for improving school climate and school functioning. *Mindfulness, 5,* 626-638.

Wolpert, M., Humphrey, N., Belsky, J., & Deighton, J. (2013). Embedding mental health support in schools: Learning from the Targeted Mental Health in Schools (TaMHS) national evaluation. *Emotional and Behavioural Difficulties, 18(3),* 270-283.

Wu, X., Liu, F., Cai, H., Huang, L., Li, Y., Mo, Z., & Lin, J. (2013). Cognitive behaviour therapy combined fluoxetine treatment superior to cognitive behaviour therapy alone for school refusal. *International Journal of Pharmacology, 9 (3),* 197-203.

Zachariadis, M. Scott, S. & Michael, B. (2013). Methodological implications of critical realism for mixed-methods research. *MIS Quarterly, 37 (3),* 855-879

Zenner, C., Herrnleben-Kurz and Walach, H. (2014). Mindfulness-based interventions in schools-a systematic review and meta-analysis. *Frontiers in Psychology.* doi: 10.3389/fpsyg.2014.00603.

Zoogman, S., Goldberg, S., Hoyt, W., & Miller, L. (2014). Mindfulness interventions with youth: a meta-analysis. *Mindfulness.* doi:10.117/s12671-013-0260-4.

5.0 Appendices

5.1 Appendix 1 Definition of Pupil's Emotional Health and Well-being

"*Being mentally and emotionally healthy means that we believe in ourselves and know our own worth. We set ourselves goals that we can achieve and can find support to do this. We are aware of our emotions and what we are feeling and can understand why. We can cope with our changing emotions and we can speak about and manage our feelings. We understand what others may be feeling and know how to deal with their feelings. We also understand when to let go and not overreact. We know how to make friendships and relationships and how to cope with changes in them. We understand that everyone can be anxious, worried or sad sometimes. We know how to cope with, and bounce back from, changes or problems and can talk about them to someone we trust.*" (Working Group One, 2009, p.13, in Connolly et al., 2011)

5.2 Appendix 2 Summary of Excluded Studies from Systematic Review

Database search: studies excluded by full article:

Name of study: Mendelson, T., Greenberg, M. T., Dariotis, J. K., Gould, L. F., Rhoades, B.L. & Leaf, P. J.(2010) Feasibility and Preliminary Outcomes of a School-Based Mindfulness Intervention for Urban Youth. *Journal of Abnormal Child Psychology. 38(7),* 985-994.

Reason for exclusion: 2.a. Outside of age bracket: 9 and 10 year olds.

Name of study: Le, T.N., & Gobert, J.M. (2015). Translating a mindfulness based youth suicide prevention intervention in a Native American community. *Journal of Child and Family Studies, 24(1),* 12-23.

Reason for exclusion: 2.b. Participants' mental health was described as being within the normal range or part of a "healthy population"

Name of study: Sibinga, E.M. Perry-Parish, C. Chung, S., Johnson, S. B., Smith, M., & Ellen, J. M. (2013). School based mindfulness instruction for urban male youth: A small randomized controlled trial. *Preventative medicine, 57(6),* 799-801. doi:10.1016/j.ypmed.2013.08.027

Reason for exclusion 2.b. Intervention is targeted at urban boys described as having "financial need" and "low income" with "academic potential". No indication of the presence of mental health difficulties in the sample.

Name of study: Grabble, L., Nguy, S.T. & Higgins, M.K. (2012). Spirituality development for homeless youth. A mindfulness meditation feasibility pilot. *Journal of Child and Family Studies, 21(6),* 925-937.

Reasons for exclusion

2.a. Participants were outside of the age bracket: 15-25

3.a. Multi-component mindfulness intervention "Youth Education in Spiritual Self Schema" YESS which is adapted of Spiritual Self Schema, developed for use in a drug addiction/HIV prevention programme. YESS employed mindfulness as one component and also addressed substance abuse.

Name of study: Coholic, D.A. (2011). Exploring the feasibility and benefits of arts-based mindfulness-based practices with young people in need. Aiming to improve aspects of self-awareness and resilience. *Child and youth care forum, 40(4),* 303-317.

Reasons for exclusion

3.a. Multi-component mindfulness intervention: art and mindfulness

4.a. Qualitative design

Name of study: Jennings, J.L., Apsche, J.A., Blosson, P., & Bayles, C. (2013). Using mindfulness in the treatment of adolescent sexual abusers: Contributing common factor or primary modality? *International Journal of Behavioural Consultation and Therapy, 8(3-4)* 17-22.

Reason for exclusion: 1.b. Theoretical and conceptual paper

Name of study: Chambers, R., Gullone, E., Hassed, C., Knight, W., Garvin, T,. & Allen, N. (2015). Mindful emotion regulation predicts recovery in depressed youth. *Mindfulness, 6,* 523-534.

Reason for exclusion: 1.b. Primary correlational study. Pre /post outcome measures for both groups (MBSR + TAU) and (TAU) were analysed together, (i.e. there was no between subjects design). Examined whether dispositional mindfulness would be a distinct dimension in the emotional regulation of depressed youth and the relationship of mindfulness with other mental health symptoms (anxiety and depression).

Articles from other sources: studies excluded by full article

Name of the study: Wisner, B.L. (2008) The impact of meditation as a cognitive behavioural practice for alternative high school students. Doctoral dissertation. https://www.lib.utexas.edu/etd/d/2008/wisnerd39451/wisnerd39451.pdfhttps://www.lib.utexas.edu/etd/d/2008/wisnerd39451/wisnerd39451.pdf

Reason for exclusion: 4.b Study used one third-person rating measure pre to post-test; Behavioural and Emotional Teacher Rating Scale. Self-reported student changes are measured using concept mapping and qualitative narrative data, i.e. no student quantitative measures.

5.3 Appendix 3 Detailed Description of Weight of Evidence

Kallapiran et al., (2015) conducted a systematic review to examine the effects of mindfulness based interventions on mental health outcomes of children and adolescents. Only studies which employed randomised controlled trial design were included. The quality of each study included in the review as assessed using the following criteria.

1. Participants symptoms were evaluated either using clinical interview or standardised measures with good reliability and validity
2. Intervention standardized in delivery using a manual or a structured approach
3. The therapists were adequately trained to offer treatment
4. Treatment fidelity was assessed by (i) supervision of therapists or (ii) recording of sessions, or (iii) by screening for protocol adherence
5. The study had N of 50 or more, as this allows detection of standardized *ES* of 0.8 or larger assuming a statistical power of 0.8 and alpha of 0.5
6. Patients randomised using appropriate randomisation techniques
7. Allocation concealed
8. Low risk attrition bias

Full reference: Kallapiran, K., Koo, S., Kirubakaran, R. & Hancock, K. (2015). Effectiveness of mindfulness in improving mental health symptoms of children and adolescents: a meta-analysis. *Child and Adolescent Mental Health*. Published online: doi 10. 1111/camh.12113.

The authors explain that this approach of assessing the methodological quality of studies has been previously used in systematic review of mindfulness based interventions with adults (Bohlmeijer, Prenger, Taal & Cuijpers, 2010). This criteria thus informs the assessment of methodological quality of the RCTs included in this current review, which is then weighted according to Gough's (2007) framework.

Methodological quality

Following Gough's (2007) recommendation, the methodological quality of each study was rated using generally accepted criteria for evaluating evidence. As two different study designs were used in this review, two different protocols were used

The quality of the study was assessed as high when 7-8 criteria was met, medium if 6-5 criteria were met and low if 4 or fewer criteria were met (Kallapiran et al., 2015)

Randomised clinical trials

	Participants symptoms evaluated reliably	Appropriate randomization techniques used	Sample of N=50 or more[49]	Intervention standardized in delivery using a manual or a structured approach	Treatment fidelity/integrity assessed during the study	Allocation concealed	Attrition documented and similar across samples	Results presented in clear, coherent fashion	Score /8
Biegel et al., (2009)	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	7/8 High
Tan & Martin (2015)	Yes	Yes	Yes	Yes	No	No	Yes	Yes	6/8 Medium

Quasi-experimental and pre/post design

	Participants difficulties determined appropriately	Setting described	Control or comparison group	Implementation of intervention is described	Intervention empirically evaluated	Fidelity/integrity of intervention assessed	Overall attrition rates documented	Results presented in clear, coherent fashion	Score /8
Bluth et al., (2015)	No	Yes	Yes	Yes	Yes	No	Yes	Yes	6/8 Medium
Sinha & Kumar (2010)	Yes	Yes	No	Yes	No	No	No	Yes	4/8 Low

Methodological appropriateness

Clinical trials

	Therapists adequately trained to offer treatment	Reliability and validity of outcome measures is reported	Multiple outcome measures used to assess mental health outcomes	Timing and duration of intervention described	Multi-informant measures	Post treatment follow up	Inferential statistics and effect size reported	Data analysis linked to research question	Score /8
Biegel et al.,(2009)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	8/8 High
Tan & Martin (2015)	No	2/6 not reported	Yes	Yes	Yes	Yes	Yes	Not specified	6/8 Medium

Quasi-experimental and pre/post design

	Therapists adequately trained to offer treatment	Reliability and validity of outcome measures reported	Multiple outcome measures used to assess mental health outcomes	Timing and duration of intervention described	Multi-informant measures	Post treatment follow up	Inferential statistics and effect size reported	Data analysis linked to research question	Score /8
Bluth et al., (2015)	Yes	Yes	Yes	Yes	No	No	Yes	Yes	6/8 Medium
Sinha & Kumar (2010)	Yes	Yes	Yes	Yes	Yes	No	No	Yes	6/8 Medium

Focus of the study

Focus rating thresholds: "low"= 0-1 criterion, "medium"= 2 criterion met, "high"=3 criterion met.

	Solely mindfulness based intervention (MBSR/MBCT component)	Adolescent with internalizing difficulties are the specific target of the intervention	Participants were within adolescence age range	Score /3
Biegel et al., (2010)	Yes	No	Yes	2/3 Medium
Tan & Martin (2015)	Yes	No	Yes	2/3 Medium
Bluth et al.,(2015)	Yes	No	Yes	2/3 Medium
Sinha & Kumar (2010)	Yes	Yes	Yes	3/3 High

5.4 Key Information Derived From Each Study

Authors	Sample	Design	Measures	Significant findings
Biegel, Brown, Shapiro, Schuburt (2009)	Age of children 14-18 years N or participants 102	Design RCT: MBSR plus treatment as usual (TAU) as control (n=50) vs TAU (N=52) Weeks 8 x 2hr session weekly Facilitator Master's level students, MBSR trained	DSM-IV GAF Axis 1 Disorders PSS-10 STAI SCL-90 SES	MBSR group reported reduced anxiety, depressive symptoms, somatization, increased self-esteem and sleep quality compared to TAU; MBSR group increased GAF and percentage of positive mental health changes compared to TAU
Tan & Martin (2015)	Age of children 13-18 years N of participants 80	Design RCT: TAM plus TAU (n=43) vs TAU (n=37) Weeks 5 x 1hr sessions weekly	DASS-21 SES-10 RSCA AFQ-Y CAMM CBCL	TAM group self-reported lower depression, improved self-esteem and psychological inflexibility, compared to TAU. Parent ratings indicated improvements in psychological functioning compared to TAU. Mindfulness mediated the impact of treatment group on mental health change.
Sinha & Kumar (2010)	Age of children 13-15 years N of participants 12	Design Non-experimental, non-controlled pre post design Weeks 12 x 85 minute sessions weekly Delivery Mindfulness trainer and CBT therapist	YSR CDI RCMAS HSC ICS-T SASS	Statistically significant pre to post therapy scores for depression, anxiety, hopelessness and academic stress. Teacher ratings showed reduced internalising problems and enhanced social affiliation.
Bluth, Campo, Pruteanu-Malinci, Reams, Mullarkey & Broderick (2015)	Age of children Average 17 years N of participants 27	Design Quasi experimental active control design (n=14) Control (n=13) Weeks 11 sessions over 14 weeks Delivery Mindfulness practitioner and instructor	SCS-SF SOC SMFQ CAMM STAI PSS-10	Mindfulness group showed significant decreases in depression, compared to active controls. Comparison of change scores between groups indicated decreased anxiety for mindfulness group. Qualitative data supports the feasibility and acceptability of teaching mindfulness in an alternative school setting.

5.5 Appendix 5 Letter to Principal (copy)

Dear Principal

My name is Tara Shine and I am a first year student on the Doctorate in Educat and Adolescent Psychology (DECAP) at Queen's University Belfast under Mr. DECAP academic tutor. I am writing to you to look for your permission to offe mindfulness based programme to students attending the EOTAS centre as part study.

Mindfulness is the practice and ability to direct our experience to the present m responding to events as they occur, rather than ruminating in the past or worryi future. There is a growing body of evidence to support mindfulness based inter their efficacy in supporting adult populations with chronic illness, mental healt and in the promotion of stress reduction and psychological well-being. Mindful has been adapted for use with children and adolescents and it is empirically sho in the areas of attention, optimism, relaxation, resilience and reduction in symp anxiety and depression. The Mindfulness in Schools Project (MiSP) is a univer based mindfulness curriculum developed for use with adolescents. Preliminary evaluations within a UK setting are showing its feasibility, acceptability and so benefits within secondary school settings.

I would be interested to deliver the curriculum within your school setting and e it has a positive impact on student's well-being. The programme is delivered ov sessions lasting approximately 45-60 minutes per week. The sessions are delive range of age-appropriate, interactive, experiential and lively teaching methods of resources to bring mindfulness to life (including a course booklet and a set o exercises on CD or MP3 audio files). Practical exercises, which are taught and the session and then the students are asked to do some at home. Participating st be asked to fill in a battery of self-report measures before the intervention, dire at a follow-up stage. Parents and teachers would also be invited to participate ir complete a questionnaire at three corresponding time points to rate student's so and behavioural functioning.

I hope that your education centre will be interested in participating in this resea willing to visit the centre and give a presentation to your school staff, teachers give you more information about the programme. Attached is an example letter information about the project for parents and students.

I would be happy to discuss any questions about the intervention or which you if you are interested in participating, would be more than happy to arrange an a discuss the project further.

Yours sincerely, Tara Shine

Email: t.shine01@qub.ac.uk

5.6 Appendix 6 Parent/Carer Information and Consent Form (Copy)

Information sheet for Parent/Guardian

Hi, my name is Tara Shine and I am a student in the School of Psychology in Queens University Belfast. I'm doing a research study and would like to tell you about it and see whether you and your child would like to take part. I am interested in improving the wellbeing of teenagers by teaching the life skill "mindfulness".

What is mindfulness?

Mindfulness means paying attention to what is happening right now. In the programme we will practice focusing attention and this has shown to help young people manage their emotions, improve attention, self-control and live a happier life.

Why am I being asked to participate?

- As your child is attending the education centre you and your child are invited to enrol in the programme and take part in the study.

- As your child is under 16, consent to take part will be obtained from you, on their behalf.

- It is your choice to take part in the study. If you decide not to your child's place at the education at the centre will not be affected in anyway.

What you will be asked to do

- You will be asked to fill in a questionnaire about your child's social, emotional and behavioural skills, it takes 5-10 minutes to complete. You will complete this three times:

1. before the programme
2. after the programme
3. at 3-month follow up period

- Only the researcher will have access to the questionnaires after you complete them.

What your child will be asked to do

If you and your child agrees to be in the study your child will be asked to complete four questionnaires. The questionnaires take 5-10 minutes to complete and ask questions about:

- 1) Positive emotions;
- 2) Noticing thoughts, feelings and body sensations;
- 3) How they think and make choices;

Take part in the programme

- The programme is called .b "Stop, Breath and Be" and it will be delivered by the researcher and take place one day per week over 9 weeks.
- Lessons last 45-60 minutes and teach practical skills such as training to focus attention, concentration exercises, short practices to become aware of thoughts and feelings, calming and breathing exercises.

Take part in an interview/focus group

- Children will be invited to take part in a focus group/interview (depending on numbers interested) around 4-6 months after the final questionnaires are collected.
- They will be asked to share their views of the programme and being part of the study.

How will this information be used?

- Questionnaires and other information will be kept confidential. This means that you and your child will be anonymous and names will not be used.
- If reports are published or talks are given about this research, your name or any other personal information will not be used.
- Data will be kept confidential as possible, however if information is disclosed which indicates illegal activity, breach of child protection laws or places anyone in potential danger, the researcher must act in accordance with child protection procedures.

Risks and benefits

- Young people may feel uncomfortable answering questions about their feelings. They will be prepared for this situation before filling in any questionnaires.
- They will be told that they may skip any question, request a break, or withdraw from the study at any time.
- By completing the study the researcher hopes to understand what skills from the programme are helpful, can be used in everyday life and could be recommended to other schools. In this way, the programmes delivered in the education centre can be improved for the future.

Withdrawal from this study

- Participation in this study is voluntary. You and your child are free to withdraw from the study at any time and this will have no impact on your child's placement in the centre or relationship with school staff.
- You will not be asked for a reason for withdrawal.

Further information

When you have read this information, the person who gave it to you will discuss it further with you and answer any questions you may have. If you would like to know more at any stage, please feel free to contact Tara Shine Research, by email t.shine01@qub.ak.uk . The study has been approved by School of Psychology Ethics Committee, Queens University Belfast in accordance with the British Psychological Society's Code of Conduct (2009). If you have concerns or complaints about the conduct of the research study, you may contact the School of Psychology Ethics Committee, on xxxxxxx.

Participant Consent (Parent/Guardian and Child)

I,.....[parent's/guardian's name]

of.....

.....[address]

have read and understood the Information sheet for Parents/Guardian for the above named research study which explains why my child and I have been selected. I have had the opportunity to clarify aspects of the information I did not understand and received satisfactory answers to any questions I may have asked.

- I have been made aware of the procedures involved in the study, including any known or expected inconvenience, risk or discomfort.
- I freely choose to consent for my child and I to participate in this study and understand that we can withdraw at any time and this will not affect my child's position at the centre.
- I also understand that the research study is strictly confidential and no information that identifies me and my child will be made publicly available.
- I agree that research data gathered from the results may be used in reports, talks or publications, provided that my child and I cannot be identified.
- I understand that the researcher may access my child's school files in order to understand the types of treatment my child has received, and I agree to this.

Signature:.....**Date:**.....

Name of child (please print):.....

OR

I have read the information and I do NOT give consent for me and my child to participate in this study

Signature:.....**Date:**.....

5.7 Appendix 7 Student Information and Assent Form

Information for Students and Assent Form

Hi, my name is Tara Shine and I am a student in the School of Psychology in Queen's University Belfast. I'm doing a research study and would like to tell you about it and see whether you'd be interested in taking part.

What is a research study?

- A research study is when people collect information about something they are interested in and what to find out more about.
- It is your choice to be part of this study and whether you decide to take part or not, will not change your school placement. Please read this form carefully.
- If you have questions about this research, just ask me.

Why are we doing this study?

I am hoping to teach you the life skill of "mindfulness" as part of a nine week programme which you will do during your school day. Mindfulness involves learning to direct our attention to the present moment. Rather than worrying about what has happened or might happen, it trains us to respond skilfully to what is happening right now, be in good or bad.

Why am I being told about the study?

You are being asked to be part of the study as I will be running the programme in your school.

What will I have to do?

If you agree to be in the study and your parents give permission you will be asked to:

Fill in some questionnaires

- There are four questionnaires for you to complete, which ask questions about the positive emotions you feel, how you notice your thoughts, feelings and body sensations and how you think and make choices.
- For each question you have the option not to answer if you would prefer not to.
- You will have the option to complete the questionnaire with a member of staff from your school if you need more help.
- You will be asked to fill all three questionnaires in **before** you start the programme, **after** the programme has finished and I'll come back a **few months after** and ask you to fill them in again.

There are no wrong or right answers to the questionnaires, and only I will see them, I won't be showing them to your teachers or parents.

Take part in the programme

- The programme is called .b "Stop, Breath and Be" and it will take place in school one day per week over 9 weeks. Each session lasts 45-60 minutes.
- The programme is for adolescents and in each session we will learn skills as a group, like how to focus our attention, concentrate and relax. You will learn about mindfulness in a fun way, using video clips and C.D.'s.
- You will have some things to practice at home and have the chance to share how you got on each week with the group.
- If you ever feel uncomfortable in the sessions you can take a short break or do a different activity with one of the school staff.

Take part in an interview/focus group

- I will come back some time after the sessions have finished to talk to you, in a group or individually.
- I'll ask you to tell me about taking part in the programme and what it was like to learn mindfulness.
- ***What if I don't want to be part of the study?***

- You don't have to be part of this study if you don't want to. If you do not want to take part just tell me or a member of school staff.
- You can withdraw from the study at any time and you don't need to give me a reason why.

Who will know I am in the study?

- You and your parents, your teachers and me are the only ones who will know you are part of the study. If I give talks about this research, we will not use your name or any other personal information that would identify you.

ASSENT OF ADOLESCENT

If you decide, and your parents agree, we'll give you a copy of this form to keep.

If you would like to be in this research study, please sign your name on the line below.

_____ _____

Child's Name/Signature (*printed or written by child*)* Date

_____ _____

Signature of Investigator/Person Obtaining Assent Date

5.8 Appendix 8 Teacher Information and Consent Form

My name is Tara Shine and I am a Trainee Educational Psychologist with the Doctorate of Educational, Child and Adolescent Psychology programme, Queens University Belfast. I am interested in promoting the wellbeing of teenagers by teaching the technique "mindfulness".

What is mindfulness?

Mindfulness means paying attention to what is happening right now with an open and curious mind. I aim to deliver a mindfulness base programme which practices directing attention to present moment experience and trains us to respond skilfully to whatever is happening right now, be it good or bad.

Why am I being asked to participate?

As the students you teach in the education centre are invited to participate in the study, your participation is also sought.

Please read the information about the study below and if there is anything you do not understand, please ask. It is your choice to take part in the study and if you decide not to participate, students' involvement in the study and normal access to the education centre will not be affected in anyway.

What the student will be asked to do

Be part of the programme

- The programme will be delivered one day per week, over 9 weeks as part of the usual school day at the center.
- The researcher will deliver the mindfulness based programme which has been developed specifically for post-primary students.

Fill in questionnaires

Students will be asked to complete questionnaires that ask questions about 1) Positive emotions they feel; 2) How they notice their thoughts, feelings and body sensations; 3) How they think and make choices. Students complete the questionnaires at the following time points:

1. before the programme
2. after the programme
3. at 3-month follow up period

Interview/focus group

- Students will be invited to participate in a focus group or brief interview so the researcher can hear their feedback and viewpoint on all aspects of the training, how the programme has helped them or suggestions for improvement.

What you will be asked to do

Help students during the study

- The training should not cause students any harm but should they become unwell, distressed or anxious during sessions they may take or break or leave the session. An agreed protocol will be used to support school staff in taking the most appropriate action should this occur.

Fill in questionnaires

- As school staff you will be asked to complete a questionnaire about selected students. Depending on the number participating in the study, students will be assigned for you to report on. The maximum number of students you will be asked to complete questionnaires for is 4.
- This questionnaire is called the Strengths and Difficulties Questionnaire. It takes 5-10 minutes to complete and you will be asked to fill it out at 3 time points:

  before the programme

  after the programme

  at 3-month follow up period

Only the researcher will have access to the scores after you complete these questionnaires.

How will this information be used?

Confidentiality

In all cases, questionnaire data will not contain names or any other identifying details in order to maintain confidentiality and anonymity. Publications of results, in reports or papers, will not identity individual children, parents or teachers. All personal information about you and students will be protected. Any person with access to personal information is bound by a duty of confidentiality.

Information will be kept as confidential as possible, however if information is disclosed which indicates illegal activity, breach of child protection laws or places anyone in potential danger, the researcher must act in accordance with child protection procedures.

Risks and benefits

One potential risk is that some young people may feel uncomfortable when answering questions about his/her feelings. They will be prepared for this situation during the consent procedure. They will be told that they may skip any question, request a break, or withdraw from the study at any time. Parents and youth are encouraged to speak with school staff should if they need further support.

By researching the effects of delivering a programme to this particular group of adolescents the researcher hope to gain a better understanding of the skills taught that are helpful and can

be used in everyday life. In this way, the programmes delivered in the education centre can be improved for the future.

Withdrawal from this study

Participation in this study is voluntary. You are free to withdraw from the study at any time and this will have no impact on your relationship with students or other staff. You will not be asked for a reason for withdrawal.

Further information

This information sheet is for you to keep. If you would like to know more at any stage, please feel free to contact Tara Shine Research, by email t.shine01@qub.ak.uk

The study has been approved by School of Psychology Ethics Committee, Queens University Belfast in accordance with the British Psychological Society's Code of Conduct (2009). If you have concerns or complaints about the conduct of the research study, you may contact the School of Psychology Ethics Committee, on xxxxxxx.

Participant Consent (School staff)

I,.....[name of school staff member]

I have read and understood the Information sheet for School staff for the above named research study which explains why I have been selected. I have had the opportunity to clarify aspects of the information I did not understand and received satisfactory answers to any questions I may have asked.

- I have been made aware of the procedures involved in the study, including any known or expected inconvenience, risk or discomfort.
- I freely choose to consent to participate in this study and understand that I can withdraw at any time and this will not affect my position at the centre.
- I also understand that the research study is strictly confidential and no information that identifies me will be made publicly available.
- I agree that research data gathered from the results may be published, provided that my I cannot be identified.
- I understand that I may be asked to help students complete questionnaires, attend programme sessions or supervise children who request a break from any part of the research study. This will be discussed between participating school staff and researcher prior to commencement of study.

Name (Please print):.....

Signature:.....**Date:**.....

I have read the information and I do NOT give consent my participation in this study

Signature:.....**Date:**.....

5.9 Appendix 9 Ethical Approval

Queen's University Belfast

School of Psychology
Queen's University Belfast
David Keir Building
18-30 Malone Road
BELFAST BT9 5BN
Tel: 028 90975445
psychology@qub.ac.uk
www.psych.qub.ac.uk

Ms Tara Shine
School of Psychology

22 July 2014

Dear Tara

Full title of Study: A mixed-methods feasibility study of the effectiveness and acceptability of implementing a mindfulness based curriculum to adolescents attending an alternative education provider (AEP) in Belfast, presenting with anxiety based school refusal.
PREC reference number: 63-2014

I write to advise you that your application to the Psychology Research Ethics Committee has been discussed by the Committee at its meeting on 22 July 2014.

I can confirm that ethical approval has been granted for your project by the School of Psychology Research Ethics Committee, on behalf of Queen's University Belfast.

Please note that the Participant Information sheet should include an appended statement confirming ethical approval.

It is the responsibility of the Chief Investigator to ensure that the research has been recorded on the University's Human Subjects Research Database otherwise it will not be covered by the University's indemnity insurance. This database can be found in the 'My Research' section of Queen's On-line.

Yours sincerely

pp.

Dr Ian Sneddon (Chair)
Psychology Research Ethics Committee

Cc Dr Joe Duffy

5.10 Appendix 10 Protocol for Managing Distress for Students in EOTAS Provision.

The following protocol will be implemented to minimise risk and manage any psychological or physiological distress over the course of programme implementation and data collection.

1. Psycho-education will be provided on thoughts, feelings and behaviour as part of the .b curriculum. Students will also be taught safe and immediate techniques (such as calm breathing) for managing feelings of stress, negative thoughts and physical discomfort. Participants will be encouraged to use these skills should any parts of the sessions or data collection process cause them to experience any emotional or physical responses.
2. .b sessions will involve exercises which are aimed to teach students how to relax and calm their body and mind. The researcher will check to ensure that participants feel relaxed before, during and after data collection.
3. Questionnaires and interviews will be administered with the researcher and staff member present. Special effort will be made to ensure participants are seated with ample space to complete questionnaires and their written responses are free from view of other participants. Participants will be notified of their options to complete questionnaires (with a staff member/researcher) at the obtainment of consent.
4. The young person will be reminded that if they find the sessions uncomfortable or become distressed they can take a short break. If they do not wish to continue the session there will be a staff member available to supervise them in the education centre and provide them with another activity until the group is finished.
5. In the event of a young person showing continued distress they will be offered the chance to seek support from a member of school staff.
6. If the young person would prefer to seek support from someone else the researcher will facilitate this where possible: contacting a parent, speaking to another member of school staff etc.
7. The wellbeing of participants is given highest priority at all times and researcher will be on site before and after session delivery, throughout data collection and available to contact, to offer advice support and guidance to participants and school staff.

Protocol for participants whose responses cause concern to the researcher in relation to participant safety and wellbeing

Responses which cause concern to the researcher in relation to a young person's safety or wellbeing, such as harm they may cause to themselves or low mood, will be followed up. The following options will be made available to young people, school staff and parents.

1. Psycho-education: The programme delivered by the researcher teaches participants how different parts of the body respond to stress and ways to calm the body down to think more clearly and stay in control of emotions. Participants will be encouraged to practice skills taught, guided by a C.D they receive as part of the programme, and explained that this will help maintain positive mental health. Participants will also be provided with information on services which can be accessed to address mental health concerns.
2. Sign-posting: A list of support services participants can access will be made available. Where a specific concern has been raised the young person will be made aware of relevant support services. The following list will be made available to participants if deemed appropriate:

    - **Lifeline** (Website: http://lifelinehelpline.info): Free phone 0808 808 8000)
    - **Childline** (Website: http://www.childline.org.uk: Free phone 0800 11111)
    - **Young Minds** (Website: http://www.youngminds.org.uk/for_children_young_people)

    3. Parent: Where appropriate a telephone call or meeting will be arranged with the parent or guardian to inform them of the concern and sign-posted to suitable services should the require additional support.

    4. School: Psycho-education will be provided to school staff on how best to support young people who are finding the sessions difficult or affected by some part of the data collection process. The EOTAS education centre is a specialist school for pupils referred with anxiety based school refusal and staff members are trained appropriately for this role.

5.11 Appendix 11 Overview of Nine Mindfulness Sessions

Session	Skills taught	Core practices
Lesson 1: Puppy Training	✓ Directing attention ✓ Exploring and investigating breathing physical sensations ✓ Training the mind to aim and sustain attention through firm, patient, kind repetition	• Simple directing of attention • Experimenting with the 'searchlight' of attention • Breath counting
Lesson 2: Taming the Animal Mind	✓ Approaching experience with an attitude of curiosity and kindness ✓ Calming the mind by 'anchoring' it in the body	• Relaxing and breathing with experience • Feet on Floor Bum on Chair-FOFBOC practice
Lesson 3: Dealing with Worry	✓ Recognising what our minds do that make us worry: we *interpret*, we *ruminate,* we *catastrophise* ✓ Hot cross bun: thoughts, emotions, body sensations and actions are connected in a feedback loop	• Un-worry' via a 7/11 • Beditation (body scan)
Lesson 4: Being Here Now	✓ Stepping out of autopilot mode ✓ Savouring pleasant experiences ✓ Responding rather than reacting to the unpleasant	• Savouring experience • Malteaser, chilli, raisin • Stop-Breathe-Be .b practice
Lesson 5:Moving Mindfully	✓ Moving mindfully ✓ Bringing mindfulness to everyday activities ✓ Cultivating 'flow' and being 'in the zone'	• Standing mindfully • Walking mindfully • Mindful routine activity
Lesson 6: Stepping Back	✓ Seeing thoughts as 'traffic' that flows through the mind ✓ Identifying some of the thought-buses that pass through your head ✓ Recognising that you don't have to 'get on the bus' of difficult thoughts	• Listening to sounds and thoughts as sounds • Observing thought-buses
Lesson 7: Befriending the difficult	✓ Understanding stress ✓ Recognising your 'stress signature' ✓ Responding rather than reacting	• Stress induction exercise-Shock Ball • The Guest House- Rumi
Lesson 8: Taking in the Good	✓ Encouraging an appreciation of what is good in life ✓ Watching Holocaust survivor as an example of looking for beauty everywhere	• Savouring practice • Three good things gratitude practice
Lesson 9:Pulling it all together	✓ Revision of previous eight lessons ✓ Considering which of the skills taught would be helpful in the future	• Considering how skills could help change their life for the better • Writing advice to self • Final FOFBOC • Certificate of Participation

5.12 Appendix 12 Self-report Measures

Table 2.3 The Child and Adolescent Mindfulness Measure

Child and Adolescent Mindfulness Measure (CAMM; Greco, Baer, & Smith, 2010)

We want to know more about what you think, how you feel, and what you do. **Read** each sentence. Then, circle the number that tells **how often each sentence is true for you.**

1. I get upset with myself for having feelings that don't make sense.	0	1	2	3	4
2. At school, I walk from class to class without noticing what I'm doing.	0	1	2	3	4
3. I keep myself busy so I don't notice my thoughts or feelings.	0	1	2	3	4
4. I tell myself that I shouldn't feel the way I'm feeling.	0	1	2	3	4
5. I push away thoughts that I don't like.	0	1	2	3	4
6. It's hard for me to pay attention to only one thing at a time.	0	1	2	3	4
7. I get upset with myself for having certain thoughts.	0	1	2	3	4
8. I think about things that have happened in the past instead of thinking about things that are happening right now.	0	1	2	3	4
9. I think that some of my feelings are bad and that I shouldn't have them.	0	1	2	3	4
10. I stop myself from having feelings that I don't like.	0	1	2	3	4

Table 2.4 The Acceptance and Fusion Questionnaire for Youth (AFQ-Y)

We want to know more about what you think, how you feel, and what you do. Read each sentence. Then, circle a number between 0-4 that tells how true each sentence is for you.

1. My life won't be good until I feel happy.	0	1	2	3	4
2. My thoughts and feelings mess up my life.	0	1	2	3	4
3. If I feel sad or afraid, then something must be wrong with me.	0	1	2	3	4
4. The bad things I think about myself must be true.	0	1	2	3	4
5. I don't try out new things if I'm afraid of messing up.	0	1	2	3	4
6. I must get rid of my worries and fears so I can have a good life.	0	1	2	3	4
7. I do all I can to make sure I don't look dumb in front of other people.	0	1	2	3	4
8. I try hard to erase hurtful memories from my mind.	0	1	2	3	4
9. I can't stand to feel pain or hurt in my body.	0	1	2	3	4
10. If my heart beats fast, there must be something wrong with me.	0	1	2	3	4
11. I push away thoughts and feelings that I don't like.	0	1	2	3	4
12. I stop doing things that are important to me whenever I feel bad.	0	1	2	3	4
13. I do worse in school when I have thoughts that make me feel sad.	0	1	2	3	4
14. I say things to make me sound cool.	0	1	2	3	4
15. I wish I could wave a magic wand to make all my sadness go away.	0	1	2	3	4
16. I am afraid of my feelings.	0	1	2	3	4
17. I can't be a good friend when I feel upset.	0	1	2	3	4

Table 2.5 The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

Below are some statements about feelings and thoughts.

Please tick the box that best describes your experience of each over the last 2 weeks

STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
e been feeling optimistic about the ture	1	2	3	4	5
e been feeling useful	1	2	3	4	5
e been feeling relaxed	1	2	3	4	5
e been feeling interested in other ople	1	2	3	4	5
e had energy to spare	1	2	3	4	5
e been dealing with problems well	1	2	3	4	5
e been thinking clearly	1	2	3	4	5
e been feeling good about myself	1	2	3	4	5
e been feeling close to other people	1	2	3	4	5
e been feeling confident	1	2	3	4	5
e been able to make up my own mind out things	1	2	3	4	5
e been feeling loved	1	2	3	4	5
e been interested in new things	1	2	3	4	5
e been feeling cheerful	1	2	3	4	5

Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)

5.13 Appendix 13 Interview schedules

Interview schedule post course

(Provide Student Course Booklet as reminder of sessions)

"Tell me about your experience of being involved in the sessions?"

Looking at the course as a whole, what did you like most about it?
(Can you tell me a bit more about that, what was it about that that you liked?)

Was there anything you didn't like about the course?
(Can you tell me some more, why did you not like that?)

How do you think the course might be improved?
(Why do you think that?)

What stood out for you about the programme? What do you think you take away from the sessions/use most?

Noticing change and outcomes

"Tell me about any changes you have noticed after being involved in the sessions"

In what ways do you feel you have become more aware of your thoughts and feelings since completing the course?
(What has made you more aware/Why do you think you haven't noticed a change?)

What changes have you noticed in how you respond to you thoughts, emotions or situations?
(What has changed/what do you do differently? What else helped?)

Have you noticed any other changes since completing the course?
(Why/Why not? Can you tell me more about that? How have you noticed the change?)

Closing questions

"What are your views on other students' learning mindfulness at school?"

Why/Why not? Any ways you would do it differently? Do you think something else would be more useful?

Anything else you would like to say or final thoughts? Any things you would like to follow up on that I haven't asked you?

Interview Schedule Follow-up

Change process

So I just want to check in with some of the things you found helpful after finishing the course. You spoke about feeling relaxed during the course. Can you tell me what that's like for you now?

(Can you tell me more? What has changed since finishing the course? Why do you think that has/hasn't changed?)

Lasting effects

The last time we spoke you spoke about using some of the practices outside of the sessions? Is this something you're still doing?

OR

The last time we spoke you hadn't tried any of the practices. Is this the same for you now?

Future use

"***In what ways do you think you could use mindfulness in the future?***"

(Why/Why not? Can you give me an example of a situation? How could it help?)

Closing question

Anything else you would like to say or final thoughts?

5.14 Appendix 14 Phase One of Thematic Analysis: Familiarisation

Notes made during the transcription process and familiarisation of the data set:

- The majority of the students enjoyed it, perceived as something different and new. Agreed it was good to have in school
    - **Assumptions**: School is inherently busy and students need time out
- Participation in sessions had a calming effect. Sessions were relaxing but also had a lasting calming effect as students learned how to relax
- The students saw the practical value of being part of the sessions it had face validity; learned new techniques that could be applied to their own experience
- For some an internal focus such as breathing brought a sense of frustration and others appreciated the silence and benefited from it
- **Christine-** didn't find the breathing helpful, relied on other strategies such as listening to music. Practiced with the C.D.
- Inspired to 'live in the present' after experiencing the benefits. Perception of techniques as tools they could take away with them for use in the future
- For some students there was a deeper connection with the programme and a level of increased understanding
    - More in control of thoughts, reappraising thoughts, facing anxious situations armed with new tools, applying mindfulness to other areas of life such as sport
- Experiential learning with an external focus was memorable e.g., lessons involving food, shock ball lessons embedded in a new experience (feeling anxiety in the body)
- Breathing techniques perceived as a way to manage difficult feelings but for others it is framed negatively due to previous experiences
- More of a focus on changing negative feelings/thinking rather than more positive moods/feelings

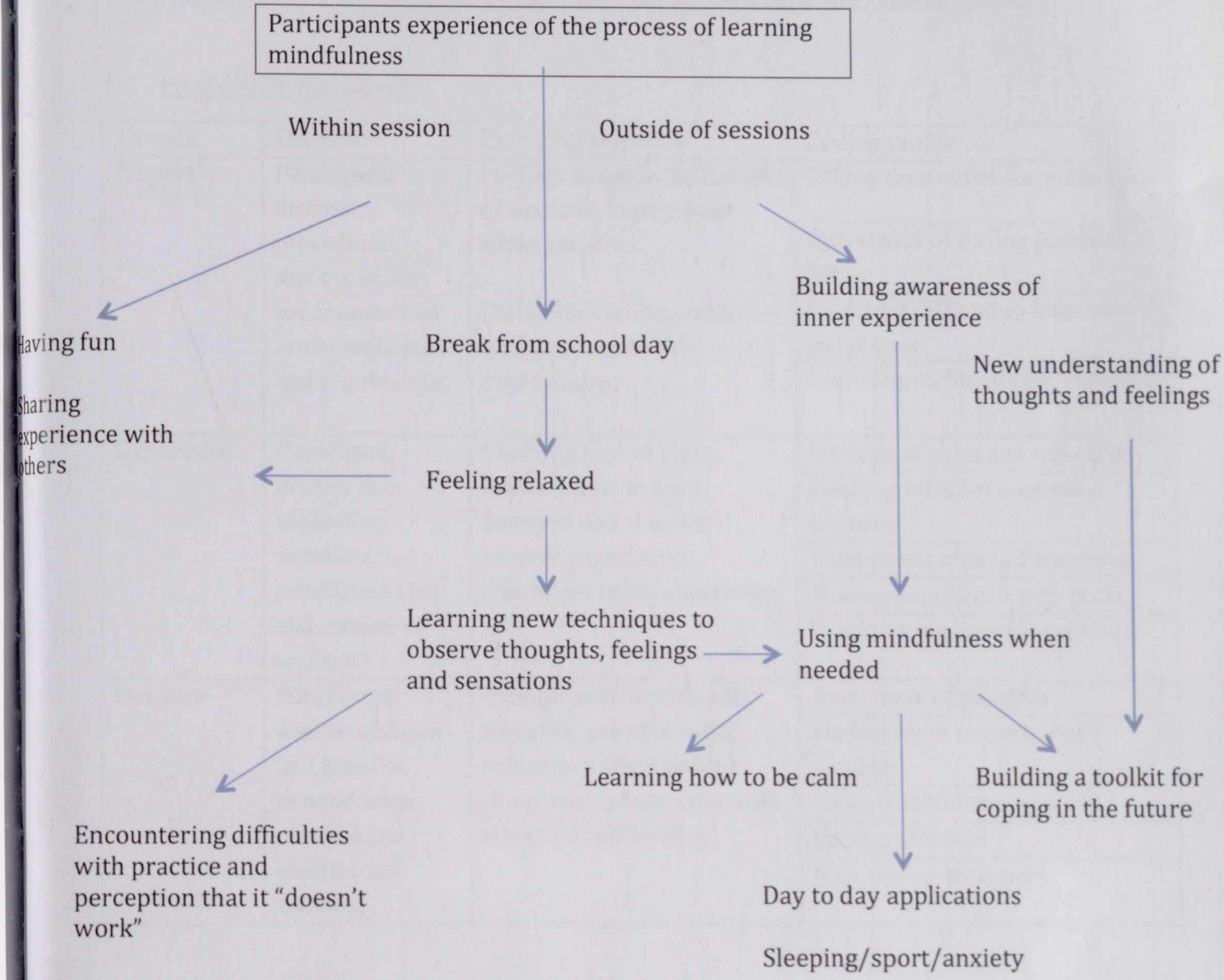
5.15 Appendix 15 Phase Two of Thematic Analysis: Generate Initial Codes

- Mindfulness fits into school
- Sharing experience with peers
- Taking time out of the school day
- Being with peers enhanced sessions
- Therapeutic quality of session
- Feeling less anxious
- Feelings of calm and relaxation
- Aware of anxiety cues
- Training attention
- Feeling restless
- Developing inner awareness
- Accepting thoughts
- Learning new coping skills
- Learning a skill that works
- Understanding anxiety
- A break from school
- Lack of hope
- Personal freedom
- An opportunity to relax
- Reduced anxiety
- Controlling attention
- Pulling back from distress
- Regulating emotion
- Practicing what helps
- Drifting attention
- Applying mindfulness in daily life
- Positive experience of focused attention
- Feeling able to handle it
- Breathing as an easy way to relax
- Effective skills for the future
- A new attitude
- School pressure
- Less avoidance
- Coping with social situations
- Feeling more comfortable
- Positive emotions
- Using judgment
- Decreased anxiety
- Using old coping strategies
- Distracted by thoughts
- Feeling calm
- Improved peer relationships
- Focusing attention
- Enjoyment of breathing practice
- Learning to be present
- Diverting attention from distress
- Awareness of thoughts
- Taking a different perspective
- Settling thoughts
- Breathing technique isn't helpful
- Opting out of practice
- Effort to learn new skill
- Less impulsivity
- Benefits of a calm mind
- Reduced rumination
- Thinking rationally
- Working with anxious thoughts
- Applying mindfulness to sport
- A tool for future learning
- Coping strategy for future challenges

5.16 Appendix 16 Phase Three of Thematic Analysis: Searching for Themes

Theme	**Sub theme**	**Codes**	**Data Extracts**
Experience	Learning how to be calm	Practicing relaxation	"Relaxing. The breathing was relaxing to practice and I found it easy to do"
		A memorable and accessible skill	"Maybe just the simplicity of the techniques like 7/11, just breath in count to 7 breath out count to 11, its not hard to forget I suppose"
		Having a tool for calming	"Yea, its easy to remember when you feel anxious and can keep you calm"
		Feeling of calm and relaxation at school	"Yea the sort of like, breathing sort of things. Yea they were good it just relaxed you and just that sort of thing in general, just being able to feel more relaxed at school"
		Gaining new and useful skills	"Like every session was different it was never the same thing and you learned like new like ways of doing stuff like breathing and things like that
		Learning a different way to relax	"The wee thing on the chair, the breathing exercise I liked that.Learning to relax, it was something new"

5.17 Appendix 17 Phase 4: Reviewing Themes



5.18 Appendix 18 Stage Five of Thematic Analysis: Defining and Naming Themes

Final coding framework

Themes	Definition	Emerging narrative	Coding profile
Process	Participants discuss procedural aspects of the programme and initial attitudes and impressions.	Feelings towards the format of sessions, in particular silent practices Difficulties in the practice of techniques and initial expectations	Taking time out of the school day
			Importance of having personal space
			Finding it difficult to learn new techniques
			Breathing technique isn't helpful
Experience	Participants discuss their subjective experience of mindfulness (in and outside of sessions)	Learning how to relax, learning how to focus attention and attend to internal experiences, enjoyment of the experience.	Feelings of calm and relaxation
			Calming effect of controlled attention
			Therapeutic effect of breathing
			Sharing experience with peers
			Experiencing positive emotions
Outcome	Participants discuss changes and benefits derived from mindfulness practice and teaching	Change in relationship to thoughts, use of mindful techniques when needed, using strategies to cope with emotional difficulties	Awareness of thoughts
			Feeling more in control of thoughts
			Using mindfulness as a tool
			Feeling effective
			New coping strategies

5.19 Appendix 19 Phase Six: Producing the Final Report

Themes identified across interviews were connected to the research questions to expand and explain quantitative findings

1) Process:- Is mindfulness a feasible and acceptable intervention for students with anxiety based school refusal

2) Experience and 3) Outcomes- What are the effects of introducing mindfulness to students AND how does mindfulness bring about/sustain these effects

The three core themes of 'process', 'experience' and 'outcomes' were re-named in the final write up of the report and are presented below.

Major theme	**Sub theme**		
Initial perceptions	"Me time"	Challenges to practicing mindfulness	
Discovering and experiencing the practice	Learning new skills to calm myself	Sensory awareness	Enjoyment
Insight and application	Thinking differently	Using mindfulness effectively	Changing coping responses

Table 2.7

Qualitative Data Analysis

- Semi structured interviews post course and 5-month follow-up

- 8 data transcripts post course, 6 data transcripts at follow up
- Vertaim account of all verbal utterances

- Familirisation with the data 'repeated reading
- Noting down any ideas, interesting points that are relevant to the research question and emerging patterns.

- Producing inital codes from data, writing notes next to chunks of texts
- Codes were narrow and flexible to begin with and the data was re-visited to ensure information (positive and negative) had been included
- List of codes created

- Consider the relationship between codes and how they combine into an overarching theme
- Development of an inital thematic map to give an overall sense of the analysis before going into more detail

- Reveiwing themes at level of coded extracts and reworrking themes to capture coded data
- Collated themes were reviewed by an independent qualitative researcher at QUB to ensure accurate representation of the data
- Refinment of thematic map

- Final thematic map created
- Themes and sub themes were descriptively named and appropriate extracts selected
- Identification of the narrative told by the data in relation to research questions

5.20 Appendix 20 Inferential Statistics

Main effect of time analysis ANOVA

Measure	**F**	**df**	**P**	***partial*** η^2	
Student ratings					
Emotional symptoms	5.9	2	**.014**	**.457**	Large effect size < 0.25
CAMM	4.14	2	**.039**	**.372**	Large effect size <0.25
AFQ	.395	2	.681	.053	
WEMWBS	1.55	2	.247	**.18**	Medium effect size < 0.09
Teacher ratings					
Peer problems	7.89	2	**.006**	**.57**	Large effect size <.0.25

Main effect of time analysis Friedman tests

Measure	**N**	c^2	**df**	**P**
Student ratings				
Peer problems	8	.31	2	.857
Teacher ratings				
Emotional symptoms	8	3.59	2	.166

Main effect of time Paired Sample t-tests

Measure	**Time 1 Mean**	**Time 2 mean**	**t**	**df**	**p**
Parent SDQ					
Emotional symptoms	7.57	5.58	3.24	6	**.018**
Peer problems	3.86	3.71	1.99	6	.09

5.21 Appendix 21 Tests of Normality

Kolmogorov-Smirnov test

Values of skewness and kurtosis as well as the Kolmogorov-Smirnov test were used to determine whether the data deviated from the normal distribution on any measures.

The general guideline is that if the skewness statistic is more than twice its standard error then the distribution is considered to differ significantly from a symmetrical distribution (Hanna & Dempster, 2012; pg.149). Students' ratings of peer problems was greater than twice the standard error, as highlighted below. On further examination this variable was found to have a bimodal distribution, i.e., students reported struggling a lot or rated as not having a problem and few fell between these two extremes of 4 and 8.

Kolmogorov-Smirnov test results reveal the student report of peer problems, $D\ (8) = .32$, $p < .05$ and the teacher reported emotional symptoms score $D\ (8) = .29$, $p < .05$, were both significantly different from the normal distribution; non-normal.

SDQ	Test statistic *D*	*df*	*Sig*	Skewness	Kurtosis	Standard Error of Skewness	Twice the std. Error of Skewness
Emotional symptoms (Student)	.190	8	.200	-1.014	.994	.752	1.50
Peer problems (Student)	.323	8	**.014***	**1.788***	4.030	.752	1.50
Emotional symptoms (Parent)	.252	8	.144	.365	-2.116	.752	1.50
Peer problems (Parent)	.146	8	.200	-0.96	-1.088	.752	1.50
Emotional symptoms (Teacher)	.294	8	**.040***	.969	1.068	.752	1.50
Peer problems (Teacher)	.241	8	.193	.294	-1.742	.752	1.50
CAMM	.885	8	.211	-.558	-1.299	.752	1.50
WEMWBS	.886	8	.214	-1.296	1.601	.752	1.50
AFQ	.935	8	.559	.886	.339	.752	1.50

5.22 Appendix 22 Tests of Sphericity

The differences between testing sessions should have approximately equal variances. This is known as sphericity. As this study incorporates three testing sessions (i.e. pre-test, post-test and follow up) for student and teacher data Mauchly's Test of Sphericity is required for use of an ANOVA. As presented below, Mauchly's Tests, indicated by the Chi-Square statistic, were found to be non-significant which indicates the variance of the differences between each testing session are equal, therefore when interpreting ANOVA results the sphericity assumed figures, *F* statistic, are used.

Measure	Chi-Square statistic χ^2	df	Sig
Student			
Emotional symptoms	2.62	2	.27
CAMM	3.48	2	.18
AFQ	.79	2	.68
WEMWBS	.48	2	.80
Teacher			
Peer problems	.93	2	.63

The difference in parent scores has two testing sessions tested (i.e., pre-test and post-test) thus Mauchly's Test of Sphericity is not required.

5.23 Appendix 23 SDQ Cut-Off Scores

	Close to Average	Slightly raised/slightly lowered	High (Low)	Very high (very low)
Self-completed				
Emotional problems score	0-4	5	6	7-10
Peer problems score	0-2	3	4	5-10
Parent completed				
Emotional problems score	0-3	4	5-6	7-10
Peer problems score	0-2	3	4	5-10
Teacher completed SDQ				
Emotional problems score	0-3	4	5	6-10
Peer problems score	0-2	3-4	5	6-10

The initial bandings presented for the SDQ scores were 'normal', 'borderline' and 'abnormal'. These bandings were defined based on a population-based UK survey, attempting to choose cut off points such that 80% of children scored 'normal', 10% 'borderline' and 10% 'abnormal'. More recently (October 2015) a four-fold classification has been created based on an even larger UK community sample. This four-fold classification differs from the original in that it (1) divided the top 'abnormal' category into two groups, each containing around 5% of the population, (2) renamed the four categories (80% 'close to average', 10% 'slightly raised, 5% 'high' and 5% 'very high' for all scales except prosocial, which is 80% 'close to average', 10% 'slightly lowered', 5% 'low' and 5% 'very low'), and (3) changed the cut-points for some scales, to better reflect the proportion of children in each category in the larger dataset.

http://www.sdqinfo.com/py/sdqinfo/b3.py?language=Englishqz(UK)English(UK)_4-17scoring%20(2).pdf